Songs of the Bailang
a new transcription with etymological commentary

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1 Introduction

The 'Song of Bailang' (白狼歌) are three poems in a Trans-Himalayan[2] language transliterated with Chinese characters and translated into Chinese during the Han dynasty (specifically 58-75 CE). Apart from Chinese, Bailang is thus the earliest attested language of this family. The three songs are currently preserved in the 後漢書 *Hou Hanshu* (juan 86, pp. 2856-57). In this source the text of the songs is reported first in Chinese translation, in four-character lines, alternating with the original text in phonetic transcription, also in four-character lines and in smaller characters. The *Hou Han shu*, was compiled between 433 and 445. However, a note in the commentary to the *Hou Han shu* by Li Xian 李賢 (677 CE) makes clear that the latter's source was a somewhat earlier work, the *Dongguan Hanji* 東觀漢記, compiled between ca. 70 and 225 CE. According to Li Xian, in the *Dongguan Hanji* the text of the songs was in reversed order, with the transcription given as main text and the translation inserted as interlinear annotation (see Li Xian's note in *Hou Han shu*, juan 86, p. 2867).[3]

In 1979, making extensive use of previous research, W. S. Coblin published a study of these songs. In addition to transcribing the poems into Roman letters following the reconstructions of Chinese available at that time, Coblin translated the context in the *Hou Hanshu* in which the Chinese versions of the poems appear, translated the Chinese versions of the poems into English, and provided comparanda to Proto-Lolo-Burmese and Proto-Tibeto-Burman reconstructions available at that time. Ma & Dai (1982) make further cognate proposals and does Zhengzhang (1993), the latter particularly making

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2 As a geographic term unburdened by strong implications regarding the place of Chinese on the Stammbaum, 'Trans-Himalayan' has advantages over its competitors 'Sino-Tibetan' and 'Tibeto-Burman' (cf. van Driem 2014).

3 The priority of the Bailang text contradicts Coblin's (and previous researchers') hypothesis that the attested Bailang version is a translation from Chinese (1979: 196-197).

comparisons to Written Burmese. Advances in both Chinese historical phonology and comparative Trans-Himalayan linguistics more than warrant a renewed study of these poems.[4] In 2008, Christopher Beckwith undertook a study that aimed to reevaluate these songs in light of recent progress in Chinese historical linguistics. Despite the many insights of his contribution, Beckwith's reconstructions are not methodologically explicit and hence not easily verifiable.

The study here proposes to make a new transcription of the Bailang songs, incorporating the contributions of Coblin (1979) and Beckwith (2008). Currently one has a choice of easy to use Old Chinese reconstructions that incorporate the six-vowel hypothesis of Old Chinese vocalism. Schuessler (2009) produces a 'minimal Old Chinese', which aims to reflect the *opinio communis* in its reconstructions; he also offers a 'later Han' reconstruction. In contrast to Schuessler's conservatism, Baxter & Sagart (2014a and b) offer a 'new reconstruction', which self consciously incorporates controversial hypotheses and relies on a much broader set of data than previous reconstructions.[5] Broadly speaking the new elements of Baxter & Sagart's reconstructions are relevant to a very early phase of Chinese linguistic history. For those, like myself, who are broadly sympathetic to Baxter & Sagart's reconstructions, it is easy to conceptualize their 'new reconstruction' as an older phase of Old Chinese and to see Schuessler's 'minimal' reconstruction as a more recent phase of Old Chinese. Because the Bailang Song's are of early Han provenance, Schuessler's Old Chinese reconstruction provides the more useful point of departure for their study. Thus, in discussion of the pronunciation of the transcriptional Chinese dialect or of the Bailang language itself, I cite Old and Han Chinese from Schuessler (2009).[6] Because of its elegance and explicitness, I cite Middle Chinese from Baxter (1992).[7] When

4 Coblin relied on Li (1971, 1974-5) for Chinese and for Proto-Lolo-Burmese and Proto-Tibeto-Burman on Benedict (1972), Matisoff (1972), Bradley (1975), Thurgood (1974), Okrand (1974).

5 The system of Baxter & Sagart has not met with universal endorsement. Positive reviews include G. Starostin 2015, Goldstein 2015, and Hill 2017 'Review'. Negative reviews include Schuessler 2015, Ho 2016, and Harbsmeier 2016. On the one hand many criticisms apply *mutatis mutandis* to all six vowel systems (Ho 2016, esp. pp. 183-184) or even to all efforts in historical linguistics (Harbsmeier 2016, esp. pp. 484-487). On the other hand some criticisms concern details only (Schuessler 2015). Replies to the negative reviews are in press.

6 To allow the reader to concentrate on real points of disagreement rather than orthographic matters, I employ some of Baxter & Sagart's (2014b) orthographic conventions in the writing of Schuessler's Old Chinese. In particular, Old Chinese type A syllables are here marked with pharyngealization (ˤ) and the origin of the *qusheng* tone is written ubiquitously as -s. When Baxter & Sagart disagree with Schuessler on a matter of substance I duly record this in the footnotes.

7 An inconvenience of this combination of sources, is that the symbol 'a' diverges in meaning among these

citing Old Chinese for etymological comparisons, rather than as a transcription of Bailang words, the most archaic stage of this language is most relevant, consequently in this context I employ Baxter & Sagart's (2014b) reconstructions.

2 The Chinese version

Before attempting a phonological reconstruction of the Bailang versions of the songs, it is helpful to learn what the Chinese version tells about the pronunciation of Chinese at the time of songs' composition. The poems rhyme in Chinese and these rhymes provide information on Chinese pronunciation.

I provide each poem in Chinese with Coblin's translation.[8] The rhyme word of each line is given in Old Chinese, Han Chinese, and Middle Chinese reconstructions, together with a reference number for Schuessler (2009) and Karlgren (1957). For example, the rhyme word of the second line is 意, so it is annotated OChi. ʔəks > Han Chi. ʔɨə^{c} > MChi. 'iH; its rhyme group in Schuessler (2009) is 05-10 and its reference number in Karlgren (1957) is 0957a.

Poem 1

1.	大漢是治	[9]drə > ḍiə > dri drəs > ḍiə^{c} > driH	04-30/0976z	The great Han is in good order,
2.	與天合意	ʔəks > ʔɨə^{c} > 'iH	05-10/0957a	Together with Heaven it unites its intention.
3.	吏譯平端	[10]tˤon > tuɑn > twɑn	25-24/0168d	The officials and translators are just and upright,
4.	不從我來	[11]rˤək > lə > loj	05-22/0944a	They did not, pursuing us, cause us to come.
5.	聞風向化	[12]ŋ̊rˤois> huæi^{c} > huæ^{c} > xwaeH	19-08/0019a	Having heard the (winds =) customs and faced toward the (changes =) civilizing influences,
6.	所見奇異	ləks > jə^{c} > yiH	05-17/0954a	what we have seen is (strange,

three phases. In order to obviate this situation, I replace 'a' with -ɑ- for Old and Middle Chinese and 'a' with 'æ' for Han Chinese.

8 Lung (2011: 8-15) also translates the Chinese text into English.

9 Baxter & Sagart (2014b) reconstruct 治 *C.lrə.

10 Baxter & Sagart (2014b) reconstruct 端 *tˤor.

11 Baxter & Sagart (2014b) reconstruct 來 *mə.rˤək.

12 Baxter & Sagart (2014b) reconstruct 化 *q^{wh}ˤraj-s.

				extraordinary =) wonderful
7.	多賜繒布	pˤɑs > pɑ^{c} > puH	01-67/0102j	They have manifoldly given us silk cloth
8.	甘美酒食	[13]s-lək s > ziə^{c} > zijH	05-19/0921a	and sweet and (beautiful =) fine wine and food.
9.	昌樂肉飛	[14]pəi > pui >pjɨj	27-09/0580a	In splendid happiness (our flesh flies =) we are elated'
10.	屈申悉備	brəks > bɨə^{c} > bɨ^{c}> bijH	05-34/0984d	Whether we are (bending =) declining or (stretching out =) advancing, in all cases we are provided for.
11.	蠻夷貧薄	bˤɑk > bɑk > bɑk	01-67/0771p	We, the barbarians, being poor and (thin =) impoverished,
12.	無所報嗣	s-ləs > ziə^{c} > ziH	04-53/0972k	have nothing to give in repayment
13.	願主長壽	duʔ > dźu^{b} > dzyuwX	13-22/1090g	We wish for the ruler longevity
14.	子孫昌熾	t^{h}əks > tś^{h}ə^{c} > tsyhiH	05-13/0920l	And that his sons and grandsons shall be splendid and glorious.

Poem 2.

1.	蠻夷所處	[15]k-l̥ɑʔ > tśɑ^{b} > tsyhoX, tsyhoH	01-18/0085a	The place where we, the barbarians, dwell
2.	日入之部	bˤoʔ > bo^{b} > buwX	04-61/0999z	(is) the sector whee the sun (enters =) sets.
3.	慕義向化	[16]ŋ̊rˤoih> huæi^{c} > hua^{c} > xwaeH	19-08/0019a	Longing for righteousness and facing toward the civilizing influence,
4.	歸日出主	toʔ > tśo^{b} > tsyuX	10-19/0129a	we (return to =) commit ourselves to the ruler of (the place where) the sun comes out (i.e. the Chinese emperor)
5.	聖德深恩	ʔˤən > ʔən > 'on	32-09/0370j	With sagely virtue and deep kindness

13 Baxter & Sagart (2014b) reconstruct 食 *s-m-lək-s.

14 Baxter & Sagart (2014b) reconstruct 飛 *Cə.pə[r].

15 Baxter & Sagart (2014b) reconstruct 處 *t.q^{h}aʔ.

16 See note 12.

6.	與人富厚	g^{ʕ}oʔ > go^{b} > huwX	10-07/0114a	together with other people he is wealthy and (think =) affluent (i.e. he shares his wealth with others).
7.	冬多霜雪	sot > syæt > sjwet	22-18/0297a	In winter there is much front and snow;
8.	夏多和雨	[17]wɑʔ > wɑ^{b} > hjuX, hjuH	01-26/0100a	in summer there is much harmonious rain.
9.	寒溫時適	tek > tśek > tsyek	07-12/0877s	The times of cold and warmth are (suitable) in proper balance,
10.	部人多有	[18]wəʔ > wuə^{b} > wə^{b} > hjuwX	04-17/0995o	and the tribal people (manifoldly possess =) have plenty
11.	涉危歷險	[19]ŋ̊rɑmʔ >hɨæm > xjaemX ŋ̊rɑmʔ > hɨɑm > xjemX	36-06/0613f	Having traversed dangers and passed through perils,
12.	不遠萬里	rəʔ > liə^{b} > lɨ^{b} > liX	04-35/0978a	We have not considered ten thousand li to be (too) far.
13.	去俗歸德	t^{ʕ}ək > tək > tok	05-12/0919k	Departing from (or: 'casting aside') the vulgar and (returning =) turning to virtue,
14.	心歸慈母	məʔ > mə^{b} > muwX	04-64/0947a	our hearts return to the loving mother.

Poem 3

1.	荒服之外	ŋ^{wʕ}ɑts > ŋuɑs > ngwɑjH	22-08/0322a	Beyond the huang-fu region
2.	土地墝埆	k^{hʕ}rok > k^{h}rɔk > khaewk	11-02-/1225-	the soil is stony and hard.
3.	食肉衣皮	bɑi > bɨɑi > bɨe > bje	18-16/0025a	We eat meat and wear skins,
4.	不見鹽穀	k^{ʕ}ok > kok > kuwk	11-03/1226h	and we do not see salt or grain.
5.	吏譯傳風	pəm > puəm > pjuwng	36-26/0625h	The officials and translators have transmitted the (winds =) news,
6.	大漢安樂	ŋr^{ʕ}ɑuks > ŋæu^{c} > ngaewH	17-08/1125a	and the great Han is peaceful and

17 Baxter & Sagart (2014b) reconstruct 雨 *C.ɢ^{w}(r)ɑʔ.

18 Baxter & Sagart (2014b) reconstruct 有 *[ɢ]^{w}əʔ.

19 Baxter & Sagart (2014b) reconstruct 險 *q^{h}r[ɑ]mʔ for both readings, but the meaning of the notation [ɑ] differs for the two MChi. readings, viz. *xjaemX* (< *q^{h}rɑmʔ or *q^{h}romʔ) and *xjemX* (< *q^{h}rɑmʔ or *q^{h}remʔ). Still, the fact that OChi. *Kram can yield both MChi. K*jaem* and K*jem* is prime facie a violation of Ausnahmslosigkeit, albeit one the authors are aware of (see Baxter 1992: 539). Presumably the same issues also stimulate Schuessler to reconstruct two MChi. readings to only one OChi. source.

				happy.
7.	攜負歸仁	nin > nin > nyin	32-28/0388f	Leading by the hand and carrying on our backs (our dependents), we (return to =) turn to humaneness.
8.	觸冒險狹	grˤep > gɛp > heap	35-03/0630e	We have encountered and braved precipitous gorges.
9.	高山岐峻	suns > suin^{c} > swinH	34-23/0468z	The high mountains are steep and dangerous;
10.	緣崖　石	dɑk > dźæk > dzyek	02-17/0795a	We have followed along the edges of cliffs and boulders(?)
11.	木薄發家	krˤɑ > kæ > kae	01-11/0032a	(From) the tree thickets we led forth our families,
12.	百宿到洛	rˤɑk > lɑk > lɑk	02-01/0766k	And in one hundred overnight stops we have reached Lo-yang.
13.	父子同賜	sleks > sie^{c} > sjeH	08-12/0850t	Fathers and sons (in the same way =) altogether have been given (gifts);
14.	懷抱匹帛	brˤɑk > bæk > baek	02-38/0782f	they cherish and embrace rolls of silk.
15.	傳告種人	nin > nin > nyin	32-28/0388a	They transmit (the news) and tell their fellow tribesmen,
16.	長願臣僕	bˤok > bok > bowk, buwk	11-23/1211b	and long desire to be subjects and servants.

2.1 Analysis of the Chinese rimes

The three Chinese poems rhyme, generally in something approaching couplets, but the pattern is imperfect in all three.

The first poem does not rime particularly well in Old Chinese (治 *drə(s), 意 *ʔəks, 端 *tˤon, 來 *rˤək, 化 *ŋ̊rˤois, 異 *ləks, 布 *pˤɑs, 食*m-lək,[20] 飛 *pəi, 備 *brəks, 薄 *bˤɑk, 嗣, *s-ləs, 壽 *duʔ, 熾 *tʰəks). The result in Han Chinese is better, but still not particularly convincing (治 *ḍiə(^{c}), 意 *ʔɨə^{c}, 端 *tuɑn, 來 *lə, 化 *huæi^{c}, 異 *jə^{c}, 布 *pɑ^{c}, 食 *źɨk, 飛 *pui, 備 *bɨə^{c}, 薄, *bɑk, 嗣 *ziə^{c}, 壽 *dźu^{b}, 熾*tśʰə^{c}). The change that yields most of the improvement is final cluster simplification (see comm. to 4b). I suspect that with velars

20 The character 食 has two readings *zyik* < *m-lək 'eat' and *zih* < *s-ləks 'feed'. Coblin (1979: 182) translates 'food' and gives the reading *zyik* (*dźjək* in Li Fang-Kuei's system used by Coblin).

this took the form *-ks > -x > -h (Baxter 1992: 568). The change of -s > -h improves things further (Baxter 1992: 578) as does a reminder that 來 irregularly lost its velar final already in the later strata of the *Odes* (Baxter & Sagart 2014a: 230-231); it may be confidently read as *rˤə rather than *rˤək. The rhyme words (治 *drə(h), 意 *ʔəh, 端 *tˤon, 來 *rˤə, 化 *ŋ̊rˤoih, 異 *ləh, 布 *pˤɑh, 食*m-lək, 飛 *pəi, 備 *brəh, 薄 *bˤɑk, 嗣, *s-ləh, 壽 *duʔ, 熾 *tʰəh) now yield a pattern AAXAXAXXXAXAXA which is still rather unimpressive.[21]

The second poem rhymes equally well (or poorly) whether in Old Chinese (處 *k-l̥ɑʔ, 部 *bˤoʔ, 化 *ŋ̊rˤois, 主 *toʔ, 恩 *ʔˤən, 厚 *gˤoʔ, 雪 *sot, 雨 *wɑʔ, 適 *tek, 有 *wəʔ, 險 ŋ̊rɑmʔ, 里 rəʔ, 德 tˤək, 母 məʔ) or Han Chinese (處 *tśɑ^{b}, 部 *bo^{b}, 化 *huæi^{c}, 主 *tśo^{b}, 恩 *ʔən, 厚 *go^{b}, 雪 *syæt, 雨 *wɑ^{b}, 適 *tśek, 有 *wuə^{b}, 險 *hɨæm / *hɨɑm, 里 *liə^{b}, *德 tək, *母 mə^{b}). The pattern in either case is ABXBXBXAXCXCXC.

The third poem rhymes slightly better in Old Chinese (外 *ŋʷˤɑts, 埆 *kʰˤrok, 皮 *bɑi, 縠 *kˤok, 風 *pəm, 樂 *ŋrˤɑuks, 仁 *nin, 狹 *grˤep, 峻 *suns, 石 *dɑk, 家, *krˤɑ, 洛 *rˤɑk, 賜 *sleks, 帛 *brˤɑk, 人 *nin, 僕 *bˤok) than it does in Han Chinese (外 *ŋuɑs, 埆 *kʰrɔk, 皮 *bɨɑi, 縠 *kok, 風 *puəm, 樂 *ŋæu^{c}, 仁 *nin, 狹 *gɛp, 峻 *suin^{c}, 石 *dźæk, 家 *kæ, 洛 *lɑk, 賜 *sie^{c}, 帛 *bæk, 人, *nin, 僕 *bok), but the pattern is not particularly clear in either

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21 This pattern can be improved slightly to AABABAXXXAXAXA by seeing 端 *tˤon > *tuɑn as rhyming with 化 *ŋ̊rˤois > *huæi^{c}. Allowing for this rhyme requires two or three hypotheses. First, that 'r-coloring' (Baxter 1992: 573-574) had not taken place; an assumption which the rhyming of the third Chinese poem proves. Second, we must follow Baxter & Sagart (2014b) in reconstructing *-r in 端 and further supposing that *-r changed to -i in the eastern dialect of the capital (Baxter & Sagart 2014a: 264-271). Also in support of this hypothesis is the apparent rhyming in the second poem of 洗 with 尼 and of 藩 with 螺 and 漓 (*vide infra*). The third hypothesis is necessary if one prefers Baxter & Sagart reconstruction of 化 as *qʷʰˤrɑis, with the main vowel *-ɑ-, to Schuessler's *ŋ̊rˤois ,with the main vowel *-o-, a rhyme of *-ʷɑ- with original *-o- shows that *-o- had broken into *-uɑ- before acutes ('rounding diphthongization', see Baxter 1992: 566-567) by the time this poem was written. The comparison of the Bailang word 螺 *rˤoi > luɑi 雨 'rain' (22d) with Bur. ရွာ rwā 'rain', etc. confirms that this change took place in the Chinese transcriptional dialect, which is no surprise since the much earlier 左傳 *Zuozhuan* and 楚辭 *Chuci* already show evidence of rounding dipthongization (Baxter & Sagart 2014a: 252, 255), it would be surprising if rounded vowels before acutes had not dipthongized in the language of these poems.

It might appear tempting to further improve the rimes 端 *tˤuɑi, 化 *ŋ̊rˤuɑih, 布 *pˤ(u)ɑh on the basis of the change *ˤɑi > ˤɑ (Baxter & Sagart 2014: 256 esp. n. 60 on p. 399, p. 268). However, such a move is not permissible because the Middle Chinese outcomes of OChi. *-ˤɑi only merges with -*ˤɑ in certain environments (environments that 布 does not satisfy), and only after *r-coloring (Baxter 1992: 570-571), a change that we have already determined had not yet occurred in the Bailang transcriptional dialect.

stage of the language. Final cluster simplification (particularly the change *ɑts > ɑih, see Baxter 1999: 309) again improves things a bit. The pattern of the rhyme words (now 外 *ŋʷˤɑih, 埆 *kʰˤrok, 皮 *bɑi, 穀 *kˤok, 風 *pəm, 樂 *ŋrˤɑuh, 仁 *nin, 狹 *grˤep, 峻 *sunh,[22] 石 *dɑk, 家, *krˤɑ, 洛 *rˤɑk, 賜 *sleh, 帛 *brˤɑk, 人 *nin, 僕 *bˤok) becomes ABABXXCXXDXDXDCB. This pattern, such as it is would be obliterated by 'r-coloring', so we can conclude that this change had not yet taken place (Baxter 1992: 573-574)

In sum, it is possible to conclude that the Chinese transcriptional dialect of the Bailang songs had not yet undergone 'r-coloring', but had undergone 'final cluster simplification' and probably also 'rounding dipthongization' (see note 21).

3 The Bailang version

The presentation of the Bailang version given below follows the conventions used above for the Chinese rhyme words, but in the Bailang case the various pieces of information, viz. Old Chinese, Han Chinese, Middle Chinese, Schuessler reference, Karlgren reference, are given for each character of the text. The Bailang text is aligned with its Chinese translation character by character, a process that on occasion requires an inversion of two Chinese characters. I usually follow Coblin's (1979) suggestions in this regard; all cases are noted explicitly. The Chinese words are also rendered into English.

Poem 1

1.	a.	堤	dˤe > de > dej	07-14/0866k	大	'big, great'
	b.	官	kʷˤɑn > kuɑn > kwɑn	25-01/0157a	漢	'Han'
	c.	隗	ŋʷəi > ŋui > ngjwɨj	28-01/569-	是	'this, that'
	d.	構	kˤos > ko^{c} > kuwH	10-02/0109g	治	'to be in order, to put in order'
2.	a.	魏	ŋʷəi(s) > ŋui(^{c}) > ngjwɨj(H)	28-01/0569k	與	'together with'
	b.	冒	mˤus > mou^{c} > mɑwH	13-74/1062a	天	'Heaven'
	c.	逾	lo > jo > yu	10-23/0125o	合	'unite, join'
	d.	糟	tsˤu > tsou > tsɑw	13-55/1053g	意	'intention'
3.	a.	罔	mɑŋʔ > muɑŋ^{b} > mjɑngX	03-65/0742l	吏	'officials'
	b.	驛	lɑk > jæk ~ jɑk > yek	02-25/0790h	譯	'translator'
	c.	劉	ru > liu > ljuw	13-47/1114a'	平	'just, fair'

22 Han 峻 *suin^{c} may however seem like an improvement over Old Chinese 峻 *suns, because in the more recent reading the word can be understood to rhyme with 仁 *nin and 人 *nin.

	d.	脾	be > bie > bjie	07-29/0874h	端	'honest'
4.	a.	旁	bˤɑŋ > bɑŋ > bɑng, pˤɑŋ > pæŋ > paeng	03-57/0740f'	從	'pursue, follow'
	b.	莫	mrˤɑk > mæk > maek mˤɑk > mɑk > mɑk mˤɑks > mɑ^{c} > muH	02-40/0802a	不	'not'
	c.	支	ke > kie > tśe > tsye	07-03/0864a	我	'we, us'
	d.	留	ru > liu > ljuw	13-47/1114p	來	'cause to come'
5.	a.	徵	drəŋ > ḍɨŋ > dring trəŋ > ṭɨŋ > tring trəʔ > ṭiə^{b} > triX	06-11/0891a	聞	'hear'
	b.	衣	ʔəi(s) > ʔɨi(^{c}) > 'jɨj(H)	27-05/0550a	風	'(wind =) custom'
	c.	隨	s-wɑi[23] > zyæi > zjwe	19-09/0011g	向	'face toward'
	d.	旅	rɑʔ > liɑ^{b} > ljoX	01-55/0077a	化	'(change =) civilizing influence'

23 Baxter & Sagart (2014b) reconstruct *sə.loj.

6.	a.	知	tre > ṭie > trje	07-13/0863a	所	relative clause nominalizer
	b.	唐	lˁɑŋ > dɑŋ > dɑng[24]	03-12/0700a	見	'see'
	c.	桑	sˁɑŋ > sɑŋ > sɑng	03-53/0704a	奇	'strange'
	d.	艾	ŋˁɑs > ŋɑs > ngɑjH ŋɑs > ŋiɑs > ngjojH[25]	21-10/0347c	異	'different'
7.	a.	邪	jɑ > jæ > yae s-lɑ > ziæ > zjae s-lɑ > ziɑ > zjo[26]	01-47/0047a	多	'much, manifoldly'
	b.	毗	bi > bi > bjij	26-38/0566u	賜	'give'
	c.	□	(reading unknown)	38-11/0658-	繒	'silk'
	d.	綃	pˁɑʔ > pɑ^{b} > puX	01-67/0102-	布	'cloth'
8.	a.	推	tʰˁuj > tʰuəi > thwoj tʰuj > tśʰui > tsyhwij	28-11/0575a'	美	'beautiful, fine'[27]
	b.	潭	lˁəm > dəm > dom	38-16/0646b	甘	'sweet'
	c.	僕	bˁok > bok > bowk, buwk pʰˁok > pʰok > phuwk	11-23/1211b	酒	'wine'
	d.	遠	wɑns > wɑn^{c} > hjwonH wɑnʔ > wɑn^{b} > hjwonX[28]	25-15/0256f	食	'food'
9.	a.	拓	tʰˁɑk > tʰɑk > thɑk	02-17/0795m	昌	'splendid, bright'
	b.	拒	gɑʔ > gɨɑ^{b} > gjoX kwɑʔ > kyɑ^{b} > kjuX	01-19/0095i	樂	'happiness'
	c.	蘇	sŋˁɑ > sɑ > su	01-31/0067c	肉	'meat'
	d.	便	bens > biæn^{c} > bjienH ben > biæn > bjien benʔ > biæn^{b} > bjienX[29]	23-25/0221a	飛	'fly'
10.	a.	局	gok > guok > gjowk	11-05/1214a	屈	'bend'
	b.	後	ɦˁos[30] > ɣo^{c} > huwH ɦˁoʔ > ɣo^{b} > huwX	10-08/0115a	申	'stretch'

24 Schuessler reconstructs *g-lɑŋ, a view that relies on combining GSR 0700 with GSR 0746, a velar initial series. Baxter & Sagart (2014b) reconstruct *[N-]rˁɑŋ. The most neutral (late) Old Chinese reconstruction is *lˁɑŋ, and we employ this reconstruction here.

25 Baxter & Sagart (2014b) reconstruct *C.ŋˁa[t]-s.

26 Baxter & Sagart (2014b) reconstruct 邪 yae < *[ɢ](r)A, zjae < *sə.ɢA, and zjo < *sə.la.

27 I have switched these two characters around (see discussion at 8b below). Coblin does not do this.

28 Without making his reasons explicit, Beckwith reconstructs with a final *-r (2008: 97).

29 Without making his reasons explicit, Beckwith reconstructs with a final *-r (2008: 97). The

	c.	仍	nəŋ > ńɨŋ > nying	04-38/0945e	悉	'all'
	d.	離	rɑi > liæi > lje rɑis > liæi^{c} > ljeH	18-11/0023f	備	'provided, furnished, prepared'
11.	a.	僂	roʔ > lio^{b} > ljuX rˤo > lo > luw	10-29/0123b	蠻	'southern barbarian'
	b.	讓	nɑŋs > ńɑŋ^{c} > nyangH	03-42/0730i	夷	'barbarians'
	c.	龍	roŋ > lioŋ > ljowng mrˤoŋ > mɔŋ > maewng	12-15/1193a	貧	'poor'
	d.	洞	dˤoŋs > doŋ^{c} > duwngH	12-09/1176h	薄	'thin (= poor)'
12.	a.	莫	mrˤɑk > mæk > maek mˤɑk > mɑk > mɑk mˤɑks > mɑ^{c} > muH	02-40/0802a	無	'have not'
	b.	支	ke > kie > tśe > tsye	07-03/0864a	所	relative clause nominalizer
	c.	度	dˤɑk > dɑk > dɑk dˤaks > dɑ^{c} > duH	02-16/0801a	報	'repay, give in repayment'
	d.	由	lu > jiəu > yuw[31]	13-30/1079a	嗣	
13.	a.	陽	lɑŋ > jɑŋ > yɑng	03-38/0720e	願	'wish, desire'
	b.	雒	rˤɑk > lɑk > lɑk	02-01/0766q	主	'ruler'
	c.	僧	səŋ[32] > song	06-19/0884-	壽	'longevity'
	d.	鱗	rin > lin > lin	32-26/0387k	長	'long'
14.	a.	莫	mrˤɑk > mæk > maek mˤɑk > mɑk > mɑk mˤɑks > mɑ^{c} > muH	02-40/0802a	子	'son'
	b.	稚	drih > ḍi^{c} > drijH	28-11/0575y	孫	'grandson'
	c.	角	krˤok > kɔk > kaewk	11-02/1225a	昌	'splendid'
	d.	存	dzˤən > dzən > dzwon[33]	33-22/0432a	熾	'glorious'

reconstruction *[b]e[n] of Baxter & Sagart (2014b) allows for a final *-r, but does not posit one.

30 Baxter & Sagart (2014b) reconstruct 後 *ɢˤoʔ.

31 Schuessler in fact reconstructs Old Chinese 由 *ju (2009: 175); I follow Baxter & Sagart (2014b) in rejecting initial *j- in Old Chinese.

32 Schuessler does not offer an Old Chinese reconstruction for the reading of this character.

33 Schuessler regards the rime development as irregular.

Poem 2

15.	a.	僂	roʔ > lio^{b} > ljuX rˁo > lo > luw	10-29/0123b	蠻	'southern barbarians'
	b.	讓	naŋs > ńaŋ^{c} > nyangH	03-42/0730i	夷	'barbarians'
	c.	皮	bɑi > bɨæi > bɨe > bje	18-16/0025a	所	relative clause nominalizer
	d.	尼	nˁis > nei^{c} > nejH nri > ṇi > nrij	26-25/0563a	處	'dwell'
16.	a.	且	tsˁɑʔ > tsɑ^{b} > tshjaeX	01-57/0046a	日	'sun'
	b.	交	kˁrɑu > kæu > kaew[34]	16-06/1166a	入	'enter (= set, go down)'
	c.	陵	rəŋ > lɨŋ > ling	06-17/0898c	之	possessive or attributive particle
	d.	悟	ŋˁɑs > ŋɑ^{c} > nguH	01-29/0058j	部	'sector'
17.	a.	繩	ləŋs > jɨŋ^{c} > yingH m-ləŋ > źɨŋ > zying	06-24/0892b	慕	'long for'
	b.	動	dˁoŋʔ > doŋ^{b} > duwngX	12-08/1188m	義	'righteousness'
	c.	隨	s-wɑi > zyæi > zjwe	19-09/0011g	向	'face toward, incline toward'
	d.	旅	rɑʔ > liɑ^{b} > ljoX	01-55/0077a	化	'(change =) civilizing influence'
18.	a.	路	rˁɑks > lɑ^{c} > luH	02-01/0766l'	歸	'return'
	b.	且	tsˁɑʔ > tsɑ^{b} > tshjaeX	01-57/0046a	日	'sun'
	c.	㨂	tˁoŋʔ > toŋ^{b} > tuwngX	12-06/1175-	出	'come out'
	d.	雒	rˁɑk > læk > lɑk	02-01/0766q	主	'ruler'
19.	a.	聖	l̥eŋs > śeŋ^{c} > syengH	09-17/0835z	聖	'sage'
	b.	德	tˁək > tək > tok	05-12/0919k	德	'virtue'
	c.	渡	dˁɑks > dɑ^{c} > duH	02-16/0801b	恩	'kindness'[35]
	d.	諾	nˁɑk > nɑk > nɑk	02-30/0777f	深	'deep'

34 Schuessler's in fact reconstructs Old Chinese *kˁɑu, with no medial -r-, which is a surprise since the -r- is needed to explain the vocalism of his Han reconstruction. I follow Baxter & Sagart (2014b) in reconstructing *kˁraw.

35 This and the next character are reversed following the suggestion of Coblin (1979: 190).

20.	a.	魏	ŋʷəi(s) > ŋui(ᶜ) > ngjwɨj(H)	28-01/0569k	與	'together with'
	b.	菌	gunʔ > guɨnᵇ > gwinX[36]	34-11/0484c	人	'people, men'
	c.	度	dˤɑk > dɑk > dɑk dˤɑks > dɑᶜ > duH	02-16/0801a	富	'rich'
	d.	洗	sˤərʔ > seiᵇ/senᵇ > sejX/senX[37]	33-25/0478j	厚	'(thick =) affluent'
21.	a.	綜	tsˤuŋs > tsouŋᶜ > tsowngH	15-13/1003f	冬	'winter'
	b.	邪	jɑ > jæ > yae s-lɑ > ziæ > zjae s-lɑ > ziɑ > zjo	01-47/0047a	多	'much'
	c.	流	ru > liu > ljuw	13-46/1104a	霜	'frost'
	d.	藩	par > puɑn > pjon[38]	24-54/0195s	雪	'snow'
22.	a.	莋	dzˤɑk > dzɑk > dzɑk	02-31/0806-	夏	'summer'
	b.	邪	jɑ > jæ > yae s-lɑ > ziæ > zjae s-lɑ > ziɑ > zjo	01-47/0047a	多	'much'
	c.	尋	s-ləm > zim > zim[39]	38-17/0662a	和	'harmonious'
	d.	螺	rˤoi[40] > luɑi > lwɑ	28-15/0577-	雨	'rain'
23.	a.	藐	mrˤwɑk > mɔk > maewk	16-42/1171c	寒	'cold'
	b.	潯	s-ləm > zim > zim	38-17/0662-	溫	'warm'
	c.	瀘	rˤɑ > lɑ > lu	01-51/0069-	時	'time, season'
	d.	漓	rɑi > liæi > lje	18-11/0023-	適	'suitable, in balance'
24.	a.	菌	gunʔ > guɨnᵇ > gwinX[41]	34-11/0484c	部	'tribe'
	b.	補	pˤɑʔ > pɑᵇ > puX	01-67/0102c'	人	'person'
	c.	邪	jɑ > jæ > yae s-lɑ > ziæ > zjae s-lɑ > ziɑ > zjo	01-47/0047a	多	'much'
	d.	推	tʰˤui > tʰuəi > thwoj tʰui > tśʰui > tsyhwij	28-11/0575a'	有	'have'

36 Baxter & Sagart (2014b) reconstruct *grunʔ; their reason for a medial -r- is unclear to me.

37 Schuessler reconstructs *sˤəjʔ / *sˤənʔ. I follow Baxter & Sagart (2014b) in reconstructing *sˤərʔ, because the series, and indeed this character, mixes readings with final -n and -j (cf. note 38).

38 Schuessler reconstructs *pan. I follow Baxter & Sagart (2014b) in reconstructing *par, because the series mixes readings with final -n and final -j. Beckwith (2008: 104) claims that 洗 *sˤərʔ and 藩 *par rhyme.

39 Baxter & Sagart (2014b) do not reconstruct a reading for this character. In their system the 'pre-initial' *s- would have to be 'loose' in order for an OChi. lateral to change to MChi. z- (2014a: 191).

25.	a.	辟	bˤek > bek > bek bek > biek > bjiek pek > piek > pjiek	08-19/0853a	涉	'traverse'
	b.	危	ŋoi > ŋyæi > ngjwe[42]	19-12/0029a	危	'danger'
	c.	歸	kʷəi > kui > kjwɨj	28-02/0570a	歷	'pass through'
	d.	險	ŋ̊ramʔ > hɨæm > xjaemX ŋ̊ramʔ > hɨɑm > xjemX[43]	36-06/0613f	險	'peril'
26.	a.	莫	mrˤɑk > mæk > maek mˤɑk > mɑk > mɑk mˤɑks > mɑ^{c} > muH	02-40/0802a	不	'not (verbal negative)'
	b.	受	duʔ > dźu^{b} > dzyuwX	13-19/1085a	遠	'consider to be (too) far'
	c.	萬	mˤɑns > muɑn^{c} > mjonH	21-26/0267a	萬	'ten thousand'
	d.	柳	ruʔ > lui^{b} > ljuwX	13-47/1114l	里	'li'
27.	a.	術	m-lut[44] > źuit > zywit	31-17/0497d	去	'depart from; cast away'
	b.	疊	lˤep > dep > dep	35-11/1255a	俗	'vulgar, common'
	c.	附	boh > buo^{c} > bjuH	10-39/0136k	歸	'return to'
	d.	德	tˤək > tək > tok	05-12/0919k	德	'virtue'
28.	a.	仍	nəŋ > ńɨŋ > nying	04-38/0945e	心	'heart'
	b.	路	rˤɑks > lɑ^{c} > luH	02-01/0766l'	歸	'return'
	c.	孳	dzəs > dziə^{c} > dziH	04-49/0966k	慈	'loving'
	d.	摸	mˤɑ > mɑ > mu	02-40/0802-	母	'mother'

Poem 3

40 Baxter & Sagart (2014b) reconstruct *k.rˤoi.

41 Baxter & Sagart (2014b) reconstruct *grunʔ; see note 36.

42 Baxter & Sagart (2014b) reconstruct *[ŋ](r)[o]i.

43 Baxter & Sagart (2014b) reconstruct *qʰr[a]mʔ; see note 19.

44 Baxter & Sagart (2014b) reconstruct *Cə-lut.

29.	a.	荒	m̥ˤaŋ > huaŋ > xwang	03-65/0742e'	荒	'Huāngfù region'
	b.	服	bək > buk > bjuwk bəʔ > bu^{b} > bjuwX	05-35/0934d	服	
	c.	之	tə > tśə > tśɨ > tsyi	04-27/0962a	之	Possessive or attributive particle
	d.	儀	ŋai > ŋɨæi > ngje	18-05/0002u	外	'outside'
30.	a.	犂	rˤi > lei > lej ri > li > lij	26-24/0519g	土	'earth, soil'
	b.	籍	dz(ˤ)ak[45] > dziak > dzjek	02-32/0798a'	地	'earth'
	c.	憐	rˤin > len > len	32-26/0387l	墝	'hard, stony'
	d.	憐	rˤin > len > len	32-26/0387l	埆	
31.	a.	阻	tsraʔ > tṣæ^{b} > tsrjoX	01-57/0046y	食	'eat'
	b.	蘇	sŋˤa > sa > su	01-31/0067c	肉	'meat'
	c.	邪	ja > jæ > yae s-la > ziæ > zjae s-la > zia > zjo	01-47/0047a	衣	'wear'
	d.	犂	rˤi > lei > lej ri > li > lij	26-24/0519g	皮	'skin'
32.	a.	莫	mrˤak > mæk > maek mˤak > mak > mak mˤaks > ma^{c} > muH	02-40/0802a	不	'not (verbal negative)'
	b.	碭	lˤaŋs > daŋ^{c} > dangH	03-38/0720f'	見	'see'
	c.	粗	tsʰˤa > tsʰa > tshu	01-57/0046h'	鹽	'salt'
	d.	沐	mˤok > mok > muwk	11-24/1212e	穀	'grain'
33.	a.	罔	maŋʔ > muaŋ^{b} > mjangX	03-65/0742l	吏	'official'
	b.	驛	lak > jæk ~ jak > yek	02-25/0790h	譯	'translator'
	c.	傳	dron > ḍyæn > drjwen[46]	25-25/0231f	傳	'transmit'
	d.	微	məi > mui > mjɨj	27-18/0584d	風	'(wind =) news, accounts'

45 Baxter & Sagart (2014b) reconstruct *[dz]Ak.

46 Because this word is a Chinese loan its meaning can be used to select among various Middle Chinese readings; the Middle Chinese reading is not *drjwenH* 'a record', or *trjwenH* 'relay post', but rather *drjwen* 'transmit'.

34.	a.	是	deʔ > dźe^{b} > dzyeX	07-14/0866a	大	'great'
	b.	漢	hɑrs[47] > hɑn^{c} > xɑnH	24-10/0144c	漢	'Han'
	c.	夜	jɑks[48] > ja^{c} > yaeH	02-27/0800j	安	'peaceful'
	d.	拒	gɑʔ > gɨɑ^{b} > gjoX kʷɑʔ > kyɑ^{b} > kjuX	01-19/0095i	樂	'happy'
35.	a.	蹤	tsoŋ > tsioŋ > tsjowng	12-22/1191-	攜	'take by the hand'
	b.	優	ʔu > ʔu > 'juw	13-14/1071d	負	'carry on the back'
	c.	路	rˤɑks > lɑ^{c} > luH	02-01/0766l'	歸	'return'
	d.	仁	nin > ńin > nyin	32-28/0388f	仁	'humaneness'
36.	a.	雷	rˤui > luəi > lwoj	28-15/0577o	觸	'encounter, butt into'
	b.	折	dˤe > de > dejH det > dźat > dzyet tet > tśat > tsyet	21-19/0287a	冒	'risk, brave'
	c.	險	ŋ̊rɑmʔ >hɨæm^{b} > xjaemX ŋ̊rɑmʔ > hɨɑm^{b} > xjemX[49]	36-06/0613f	險	'precipitous'
	d.	龍	roŋ > lioŋ > ljowng mrˤoŋ > mɔŋ > maewng	12-15/1193a	陝	'gorge, chasm'
37.	a.	倫	run > luin > lwin	34-24/0470c	山 [50]	'mountain'
	b.	狼	rˤɑŋ > lɑŋ > lɑng	03-43/0735l	高	'high'
	c.	藏	dzˤɑŋ > dzɑŋ > dzɑng dzˤɑŋh > dzɑŋ^{c} > dzɑngH	03-49/0727g'	岐	'precipitous'
	d.	幢	drˤoŋ > ḍɔŋ > draewng	12-08/1188e'	峻	
38.	a.	扶	bɑ > buɑ > bju pʰɑ > pʰɑ > phu pɑ > puɑ > pju	01-66/0101f	緣	'follow along the edge'
	b.	路	rˤɑks > lɑ^{c} > luH	02-01/0766l'	崖	'cliff, precipice'
	c.	側	tsrək > tṣik > tsrik	05-24/0906c	!	'large stone' (?)
	d.	祿	rˤok > lok > luwk	11-15/1208h	石	'stone'

47 The reconstruction combines Baxter & Sagart's (2011) *ŋ̊ˤars and Schuessler's (2009) *hˤans, because evidence suggests the need to treat *-r separately from *-n in the transcriptional Chinese dialect (cf. note 38), but the initial *ŋ̊ˤ- had almost certainly developed to *h- in the transcriptional dialect.

48 Baxter & Sagart (2014b) reconstruct *N.rAk-s.

49 Baxter & Sagart (2014b) reconstruct *qʰr[a]mʔ; see note 19.

50 This and the following character are reversed at Coblin's suggestion (1979: 194).

39.	a.	息	sək > sɨk > sik	05-29/0925a	木	'wood'
	b.	落	rˤɑk > lɑk > lɑk	02-01/0766q'	薄	'thicket'
	c.	服	bək > buk > bjuwk bəʔ > bu > bjuwX	05-35/0934d	發	'send forth, bring forth'
	d.	淫	ləm > jim > yim	38-15/0657b	家	'home, family'
40.	a.	理	rəʔ > liə^{b} > liX	04-35/0978d	百	'hundred'
	b.	厯	rˤek > lek > lek	08-13/0858h	宿	'overnight stay'
	c.	髭	tse > tsie > tsje	07-25/0358n	到	'reach, arrive at'
	d.	雒	rˤɑk > lɑk > lɑk	02-01/0766q	洛	'Lo-yang'
41.	a.	捕	bˤɑs > bɑ^{c} > buH	01-67/0102j'	父	'father'
	b.	茞	gin > gin > dzyin	32-01/0377-	子	'son'
	c.	菌	gunʔ > guɨn^{b} > gwinX[51]	34-11/0484c	同	'(some, together =) altogether'
	d.	毗	bi > bi > bjij	26-38/0566u	賜	'give'
42.	a.	懷	grˤuj > ɣuɛi > hweaj	28-06/0600c	懷	'cherish'
	b.	稿	kˤɑwʔ > kɑu^{b} > kɑwX	16-01/1129-	抱	'embrace'
	c.	匹	p^{h}it > p^{h}it > phjit	29-38/0408a	匹	'roll'
	d.	漏	rˤos > lo^{c} > luwH	10-27/0120a	帛	'silk'

43.	a.	傳	dron > ḍyæn > drjwen	25-25/0231f	傳	'transmit'
	b.	室	l̥it[52] > śit > syit	29-15/0413j	告	'tell'
	c.	呼	hˤɑ > hɑ > xu, hˤɑs > hɑ^{c} > xuH	01-17/0055h	種	'tribesmen'
	d.	敕	r̥ə > ṭ^{h}ɨk > trhik	05-15/0917a	人	
44.	a.	陵	rəŋ > lɨŋ > ling	06-17/0898c	長	'long'
	b.	陽	lɑŋ > jɑŋ > yɑng	03-38/0720e	願	'desire'
	c.	臣	gin > dźin > dzyin	32-01/0377a	臣	'subject'
	d.	僕	bˤok > bok > bowk, buwk	11-23/1211b	僕	'servant'

51 Baxter & Sagart (2014b) reconstruct *grunʔ; see note 36.

52 Baxter & Sagart (2014b) reconstruct *s.ti[t], a notation which permits final -k, which would lead to a rhyme.

3.1 Etymological commentary

The reconstructions of pre-historic forms of Tibetan and Burmese given in this commentary assume various proposal I have made in previous publications (see esp. Hill 2012).

1a. 堤 *dˁe > de 大 'great' at 34a spelled 是 *deʔ > dźe^{b}. It is tempting to see this word as a loan from Chinese 大. However, if one assumes this loan relationship and accepts Baxter & Sagart's (2014b) reconstruction 大 *lˁɑts (21-12/0317a), then the spellings 堤 and 是 would indicate that *l- had already changed to d- in type A syllables of the Chinese transcriptional dialect by the time of the poem's composition, whereas the comparison of 潭 *lˁəm 'sweet' (8b) to Chi. 甜 *dem* < *lˁem (36-16/0621-) 'sweet', etc. suggests that *lˁ- was retained as a lateral in the Chinese transcriptional dialect. There are two options to avoid this pitfall. First, one could understand 堤 *dˁe / 是 *deʔ 'great' to be an indigenous Bailang word. Beckwith takes this course, suggesting comparison with Tib. ཆེ་ *čhe* 'be big' (2008: 107); one might also compare Bur. တယ် *tay* 'very' (intensive) and Chi. 多 *ta* < *[t-l]ˁɑi (18-08/0003a) 'many'. Second, it is possible that this is a loanword, but that Schuessler's 大 *dˁɑs is a better reconstruction of the Chinese source than Baxter & Sagart's 大 *lˁɑts. On the development of laterals in the Chinese transcriptional dialect see the discussion at 39d.

1b. The word 官 *kʷˁɑn > kuɑn 漢 'Chinese', spelled 漢 at 34b, is a clear loanword from Chinese 漢 *n̥ˁɑrs > hɑn^{c}. The spelling of 漢 with 官 is intriguing for two reasons. First, there is a mismatch of initials (cf. note 47). Second, Chinese 漢 *n̥ˁɑrs has a final -r, and other evidence points to the need to distinguish *-r from *-n in the transcriptional dialect and Bailang (cf. note 38). Baxter & Sagart (2014b) reconstruct 官 *kʷˁɑ[n], leaving open the possibility that this word has a final *-r. Beckwith (2008: 96) reconstructs 官 *kar.

1c. 隗 *ŋʷəi > ŋui 是 'this, that'. Neither Schuessler (2009: 291) nor Baxter & Sagart (2014b) provide reconstructions for this character. I reconstruct *ŋʷəi > ŋui in Schuessler's system. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

1d. 構 *kˁos > ko^{c} 治 'to be in order, to put in order'

2a. 魏 *ŋʷəi(s) > ŋui(^{c}) 與 'together with'. Also occurs at 20a. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

2b. 冒 *mˁus > mou^{c} 天 'Heaven'. OTib. དམུ་ *dmu* 'a type of sky god' (cf. Coblin 1987),

OBur. မုိဝ်း *muiwḥ* 'sky', Tan. [illegible] *mə* < *mu (3513) 'ciel', Japhug Rgy. *tɯ-mɯ* 'ciel, pluie', Rawang *Dvmø̀* 'spirits of the upper realm' (LaPolla & Poa 2001: 13). The comparanda suggest the Bailang vowel was closer to the OChi. reading than the Han reading. Ma & Dai (1982: 22) and Zhengzhang (1993: 14) also note the same Burmese cognate, the former also proposing related forms in other languages.

2c. 逾 *lo > jo 合 'unite, join'. Zhengzhang (1993: 14) understands 逾 *lo > jo 合 'unite, join' as meaning 意 'intention' and compares WBur. လို *lui* 'to want' and Chi. 欲 *yowk* < *ɢ(r)ok (11-14/1202d) 'to desire', which he reconstructs with initial *l-.

2d. 糟 *tsˁu > tsou 意 'intention'. Zhengzhang (1993: 14) understands 糟 *tsˁu > tsou as meaning 合 'unite, join' and compares Bur. စု *cu* 'gather' and Chi. 遭 *tsaw* < *tsˁu (13-55/1053h) 'encounter'.

3a. 罔 *mɑŋʔ > muɑŋ^{b} 吏 'officials'. Zhengzhang (1993: 14) compares Bur. မင်း *maṅḥ* 'king'. This word also occurs at 33a.

3b. 驛 *lɑk > jæk ~ jɑk 譯 'translator'. Also occurs at 33b.

3c. 劉 *ru > liu 平 'just, fair'. Zhengzhang (1993: 14) compares WBur. ရိုး *ruiḥ* 'honest, naïve, simple'.

3d. 脾 *be > bie 端 'honest'.

4a. 旁 *bˁɑŋ > bɑŋ, *pˁɑŋ > pæŋ 從 'pursue, follow'. Tib. བང་ *baṅ* 'run', e.g. *soṅ-ste phyi-rol-tu baṅ-nas / brag mthon-po źig-la mchoṅs-so /* 'he went, ran away, and jumped from a high precipice' (*Mdz*. 146a-b); *bla-ma-la grwa-pa rta-bas baṅ mgyog-pa/ glaṅ-po-che-bas che-ba gcig yod-pa*...the lama had a monk who was faster than a horse and stronger than an elephant' (*Mila*, de Jong 1959: 40).

4b. 莫 *mrˁɑk > mæk, *mˁɑk > mɑk, *mˁɑks > mɑ^{c}, 不 'not'. Chi. 無 *mju* < *ma (01-69/0103a) 'not have', Tib. མ་ *ma* 'not', Bur. မ *ma* 'not', etc. (see Coblin 1979: 200, Ma & Dai 1982: 21, Zhengzhang 1993: 14). The word also occurs with this spelling and meaning at 12a, 26a, and 32a. One must assume the reading *mˁɑks > mɑ^{c} rather than *mrˁɑk > mæk is intended and that *-ks had reduced to -h (or tone ^{c}), i.e. Baxter's 'final cluster simplification' (1992: 568). Baxter points to the rhyme of 路 *luH* < *Cə.rˁak-s 'road' (02-01/0766l') and 柘 tsyaeH < *tAk-s a 'kind of mulberry tree' (02-17/0795l) with 固 kuH < *[k]ˁa-s 'fortified, secure' (01-01/0049f) in Ode 241.2 as evidence of the early date of this change (1992: 568). In addition, in early Han dynasty renderings of foreign words Old Chinese *-ks never reflects foreign -s but instead “the rare transcriptions suggest an *-h* or *-χ*” (Schuessler 2009: 23). A piece of evidence, specific to the reading of 莫 is the transcription 莫邪 for the name of the

Buddha's mother, reflecting either Māyā or Mah[ā-Mā]yā.[53] This transcription appears in a narrative from the *Wei lüe* 魏略, a lost historical work compiled in ca. 265 CE; the *Wei lüe* quotation is included in a 5th-century commentary to another late 3rd-century history, the 三國志 *Sanguo zhi* (vol. 30, pp. 859-60). However, the *Wei lüe* links the story to information that would have been conveyed to the Han court by foreign (Yuezhi) envoys in 2 BCE. If so, the transcription is likely to reflect the phonology of the late 1st century BCE rather than that of the 3rd century CE.[54]

It is something of a surprise that this negation word appears not to precede a verb at 4b and 12a. The same character, potentially with a different reading, writes the word 'son' at 14a.

4c. 支 *ke > kie > tśe 我 'we, us'. Tib. ཁོ་བོ་ *kho-bo* 'I, me' (male speaker), ཁོ་མོ་ *kho-mo* 'I, me' (female speaker), Olekha *kö* 'I', Hakka Lai *ka-* 'my', Hayu *gu* 'I, me', Chang *kɤ-*, Táopíng Qiang *qo*^{55} 'my', *qa*^{55} 'me', Puxi *qa* 'me' (cf. Jacques 2007). It is noteworthy that, so far as we know, no trace of a velar or uvular initial first person pronoun is preserved in a Lolo-Burmese language. The loss of such a pronoun is thus an innovation of these languages relative to Bailang, which they are often considered closely related to (e.g. Coblin 1979: 198, 204 and Beckwith 2008: 95). Coblin points out that 莫支 at 12ab also occurs at 12ab, where the combination is glossed 無所 rather than 不我 (1979: 186). He consequently suggests that the gloss 我 'we, us' may be mistaken. However, bearing in mind that he translates 無所 as “we have not that which we (give in repayment)” (1979: 186), it is not at all unlikely that 支 here too marks a first person plural subject. Coblin further notes that “a variant form of this same word is almost certainly represented by 6a 知 *trjiei* which also corresponds to 支” (1979: 186). Nonetheless, the phonological difference between 支 *ke > kie > tśe and 知 *tre > ṭie makes it unlikely that they reflect the same morpheme. If 支 is indeed a subordinate marker it is perhaps cognate to the Japhug Rgy. subject participle *kɯ-* (Jacques 2016) and related velar nominalization prefixes in other languages (Konnerth 2016). One might fear that the comparisons of 支 *ke > kie > tśe 我 (4c) 'we, us' with cognates that have velar initials may not be appropriate because Chinese palatalized velars before front vowels early in the Hàn dynasty (Baxter & Sagart 2014a: 79). However, Miyake shows that in the 魏志 *Wei zhi* of 陳壽 Chen Shou (233-

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53 Pulleyblank (1983: 79) mentions this transcription, but makes little use of it.

54 The one piece against final cluster simplification in the transcriptional dialect is the comparison of Bailang 路 *rˤɑks > lɑ^{c} 崖 'cliff, precipice' (38b) to Tib. བྲག *brag* 'cliff', but it seems possible that this character also had a *rusheng* reading (*vide infra*).

297 CE) the character 支 is used to transcribe Japonic velar initials (2003: 111-113). If so, there is no problem proposing that velars were unpalatalized in the earlier Bailang songs.

4d. 留 *ru > liu 來 'cause to come'. Coblin compares Bur. လာ *lā* 'come' (1979: 209 note 46), a comparison Ma & Dai repeat (1982: 22). The correspondence of the vowels is a problem; I prefer to compare the same Burmese word to 路 *rˤɑks > lɑ^c 歸 'return' (18a) (see discussion at 4b and 11a-b). It is of course possible that 留 *ru > liu 來 'cause to come' (4d) and 路 *rˤɑks > lɑ^c 歸 'return' (18a) are morphologically related words in Bailang.

5a. 徵 *drəŋ > ḍɨŋ, *trəŋ > ṭɨŋ, *trəʔ > ṭiə^b 聞 'hear'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

5b. 衣 *ʔəi(s) > ʔɨi(^c) 風 '(wind =) custom'. Coblin compares WBur လေ *le* < OBur *liy 'wind' (1979: 211: 111, also cf. Tan. 𘞌 *lji* < *lji [2302], Japhug Rgy. *qale*). This suggestion is only plausible if one supposes that 衣 'jɨj < *ʔ(r)əj (27-05/0550a) 'clothes' had the medial *-r- which Baxter & Sagart (2014b) permit for it, but do not endorse. Even then, the vowel correspondence is not convincing. Zhengzhang (1993: 14) compares WBur. ဧး *ʔeḥ* 'be cool, calm'; a semantically weak comparison. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

5c. 隨 *s-wɑi > zyæi 向 'face toward'. The phrase 隨旅 s-wɑi rɑʔ >zyæi liɑ^b 'face toward the civilizing influence' also occurs at 17c-d.

5d. 旅 *rɑʔ > liɑ^b 化 '(change =) civilizing influence'. Coblin plausibly compares 旅 *rɑʔ > liɑ^b 化 'change' with Bur. လဲ *lai* 'change v.' (1979: 209 note 42). Also compare Tib. རྗེ *rǰe* < *rl^je 'exchange' (Hill 2013: 203), Tan. 𘘥 *lej* < *lej (5834) 'changer, se transformer' (Jacques 2014: 175), and OChi. 易 *yek* < *lek 'change, exchange' (08-12/0850a). The phrase 隨旅 s-wɑi rɑʔ >zyæi liɑ^b 'face toward the civilizing influence' also occurs at 17c-d.

6a. 知 *tre > ṭie 所 relative clause nominalizer. See discussion at 4c.

6b. 唐 *lˤɑŋ (cf. note 24) > dɑŋ 見 'see'. Coblin (1979: 200), Ma & Dai (1982: 21-22), and Zhengzhang (1993: 14) compare Tib. མཐོང་ *mthoṅ* 'see' and Bur. မြင် *mraṅ* 'see', two words that Nishida previously proposed as cognates (1957: 54-55, 1977: 5). Zhengzhang (1993: 14) further compares OChi. 望 *mjangH* < *maŋ-s (03-65/0742m) 'look at from a distance'. The comparison with Burmese appears exceptionally strong if one compares Baxter & Sagart's (2011) reconstruction *[N-]rˤɑŋ. However, this word also occurs at 32b spelled 碭 *lˤɑŋh > dɑŋ^c 見 'see'. The comparison of Bailang 潭 *lˤəm > dəm 甘 'sweet' (8b) with Trans-Himalayan cognates beginning with l-,

suggests that the transcriptional Chinese dialect *lˤ- had not yet changed to d-, but the transcription of the Bailang word for 'see' as both 唐 *[N-]rˤɑŋ > dɑŋ and 碭 *lˤɑŋh > dɑŋ^{c} suggests that the transcriptional Chinese dialect had already merged *[N-]rˤ- with *lˤ-.

6c-d. 桑艾 *sˤɑŋ ŋˤɑs/ŋɑs > sɑŋ ŋɑs/ŋiɑs 奇 'strange', 異 'different'. Coblin remarks that the "Chinese expression 奇異 'strange, extraordinary' is a synonym compound, and it is possible that 6c-d [桑 艾] *sang ngàd* is also a compound. The fact that bisyllabic compounds do in fact occur in the Pai-lang text is indicated by 30c-d [憐憐] *liən-liən* 'hard, stony'" (1979: 187).

7a. 邪 *jɑ > jæ, *s-lɑ > ziæ, *s-lɑ > ziɑ 多 'much, manifoldly. Ma & Dai (1982: 21-22) propose a number of possible cognates, the most promising of which is Pumi ʒə. This word also occurs at 21b, 22b, and 24c.

7b. 毗 *bi > bi 賜 'give'. Tib. √byin (pres. and fut.) སྦྱིན་ *sbyin*, (fut. and imp.) བྱིན་ *byin* 'give', OBur. ပိယ်ႈ *piyḥ* (cf. Ma & Dai 1982: 22). Zhengzhang (1993: 15) further compares Chi. 畀 *pjijH* < *pi[t]-s (29-39/0521a) 'give', a reasonable suggestion despite the irregularity of the correspondence. This word also occurs at 41d.

7c. 課 *kʰois > khuɑi^{c} 繒 'silk'.

7d. 諸 *tɑ > tśæ 布 'cloth'.

8a. 推 *tʰˤui > tʰuəi, *tʰui > tśʰui 美 'beautiful, fine'. In the transcriptional Chinese dialect -ui had already broken to -uəi (cf. note 21). Coblin identifies this word with the gloss Chi. 甘 'sweet' and compares with Jinghpaw *dəw* ~ *dwi* (*dui*^{31} in Xu et al. 1983) and Mizo *tui* (1979: 210 note 87); Ma & Dai add further comparisons including Pumi *thɯ*^{13} (1982: 22). However, I find the etymological comparison of Bailang 潭 *lˤəm > dəm with Trans-Himalayan words meaning 'sweet' sufficiently compelling to instead warrant the equation of Bailang 潭 *lˤəm > dəm with Chinese gloss 甘 'sweet' and identify 推 with the Chinese gloss 美 'beautiful'. Zhengzhang (1993: 15) compares Bur. ထူး *thuḥ* 'extraordinary, special'. See discussion at 8b.

8b. 潭 *lˤəm > dəm 甘 'sweet', Chi. 甜 *dem* < *lˤem (36-16/0621-) 'sweet', Tib. ཞིམ་ *źim* < *lʲim 'tasty', Tan. [Tangut] *ljɨj* < *lim [1079] 'bon à manger', Th. *rem* ~ *rim* 'beer drunk during the death ritual'. This word provides evidence that *lˤ- had not yet changed to d- in the transcriptional Chinese dialect (but also cf. remarks at 1a). On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

8c. 僕 *bˤok > bok, *pʰˤok > pʰok 酒 'wine'. Compare Khaling *bhʉkt* 'ferment' (Jacques 2015: 85 table 5).

8d. 遠 *wɑns > wɑn^{c}, *wɑnʔ > wɑn^{b} 食 'food'. The apparent rhymes with 便 *ben >

biæn 飛 'fly' (9d) and 存 *dzˤən > dzən 熾 'glorious' (14d), for which the cognates suggest a final -r, points to the possibility that this word also has a final -r. Beckwith reconstructs 遠 *wɑr (2008: 97). Zhengzhang (1993: 15) compares Bur. ဟင်း *haṅḥ* 'curry'.

9a. 拓 *tʰˤɑk > tʰɑk 昌 'splendid, bright'.

9b. 拒 *gɑʔ > gɨɑ^b, *kwɑʔ > kyɑ^b 樂 'happiness'. Tib. དགའ་ *dgaḫ* 'delight'. This word also occurs at 34d.

9c. 蘇 *sŋˤɑ > sɑ 肉 'meat'. Tib. ཤ་ *śa* 'flesh', Bur. သား *sāḥ* < *śāḥ (Lashi *śɔH*), Tan. 㒚 *ɕju* (2385) 'viande, chair' (Jacques 2014: 75-76), Mizo. *sâ* < *śaa 'meat' (Chinbok *hla*) (cf. Hill 2014: 17-18). Zhengzhang (1993: 64) further compares OChi. 腊 *sjek* (02-32/0798g) 'dried meat', a word missing in Baxter & Sagart 2014b, which Schuessler 2009 reconstructs *s(ˤ)ak. Ma & Dai also offer additional potential cognates (1982: 23). Whether Bailang merges *ś- and *s-, like Burmese, or whether the distinction is simply not captured in the Chinese transcription, is difficult to know. This case shows that the cluster *sŋ- had simplified to s- before the time of the transcriptional dialect. It may seem reasonable to assume that other s- prefixes likewise were fused by this time. However, the comparison of Bailang 潯 *s-ləm > zim 溫 'warm' (23b) with Bur. လုံ *lum̩* 'warm' etc. show that *s- clusters before laterals were still distinct in the Chinese transcriptional dialect. Thus, *s- clusters in the transcriptional dialect are best handled on a case by case basis. This word 蘇 *sŋˤɑ > sɑ 肉 'meat' also occurs at 31b.

9d. 便 *bens > biæn^c, *ben > biæn, *benʔ > biæn^b 飛 'fly'. Compare Chi. 飛 *Cə.pər (27-09/0580a), Tib. འཕུར་ *ḫphur*, Th. *per*, and possibly Tan. 𗏁 *phjii* (1327) and Jinghpaw *pjẹn*^33 (Ma & Dai 1982: 23, Xu et al. 1983). The reconstruction 便 *[b]e[n] of Baxter & Sagart (2014b) allows for the possibility of a final *-r; Beckwith reconstructs the Bailang word as *bjar (2008: 97).

10a. 局 *gok > guok 屈 'bend'. Chi. 曲 *khjowk* < *kʰ(r)ok (11-04/1213a) 'bent, crooked', Tib. འགུགས་ *ḫgugs* 'bend', WBur. ကောက် *kok* < *guk 'bend v.', Tan. 𘝞 *kjiwr* < *r-kjvk (1377) 'mauvais, penché', Japhug Rgy. *kɤɣ* 'courber' (cf. Zhengzhang 1993: 15).

10b. 後 *ɦˤos > ɣo^c, *ɦˤoʔ > ɣo^b 申 'stretch'.

10c. 仍 *nəŋ > ńɨŋ 悉 'all'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

10d. 離 *rɑi > liæi, *rɑih > liæi^c 備 'provided, furnished, prepared'. Coblin suggests that this may be the same word as 漓 *rɑi > liæi 適 'suitable, in balance' at 23d (1979: 188). Zhengzhang (1993: 15) proposes that this word is cognate with those words given here under 5d.

11a-b. 僂讓 *roʔ/rˤo naŋs > lioᵇ/lo ńaŋᶜ 蠻 'southern barbarian', 夷 'barbarians'. Also occurs at 15a-b. Since the "Chinese term 蠻夷 'barbarians' is a binome" the corresponding Bailang syllables 僂讓 "probably also forms a compound" (Coblin 1979: 188). Coblin further speculates that this term may have been the Bailang autonym (1979: 188). I am instead tempted to compare Bailang 僂 *roʔ/rˤo > lioᵇ/lo with Tib. ལྷོ *lho* 'south'; this hypothesis suggests that the Chinese transcriptional dialect has already changed *r(ˤ)- to l-. Since 僂 has both type A and type B readings this hypothesis itself consists of two sub-hypotheses: 1. *rˤ-> l- in type B syllables has already occurred, 2. *r- > l- in type B syllables had already occurred.

Let us first consider the hypothesis anent type A syllables. There are two comparisons weighing in favor of *rˤ- > l- in the transcriptional dialect:

1. 犁 *rˤi > lei, *ri > li 土 'earth, soil' (30a) : Chi. 地 *lˤej-s, etc.
2. 祿 *rˤok > lok 石 'stone' (38d) : OBur. ကျောက် *klok*, etc.

There are six comparisons weighing against *rˤ- > l- :

1. 螺 *rˤoi > luɑi 雨 'rain' (22d) : Bur. ရွာ *rwā*, etc.
2. 濾 *rˤɑ > lɑ 時 'time, season' (23c) : Tib. རེ *re* 'time' (Fr. fois)
3. 犁 *rˤi > lei, *ri > li 'skin' (31d), WBur. အရေ *a-re* < OBur. *a-riy, etc.
4. 狼 *rˤɑŋ > lɑŋ 高 'high' (37b), Bur. မြင့် *mraṅ?*
5. 路 *rˤɑks > lɑᶜ 崖 'cliff, precipice' (38b), Tib. བྲག *brag* 'cliff'
6. 曆 *rˤek > lek 宿 'overnight stay' (40b), OBur. ရျက် *ryak* 'day', etc.

In addition, one must further note that *rˤ > l- would have led to a merger with inherited *lˤ-, as the strong comparison of 潭 *lˤəm > dəm 甘 'sweet' (8b) to Chi. 甜 *lˤem 'sweet', etc. shows that the transcriptional dialect had not yet changed *lˤ- to d-. On balance it seems more likely that *rˤ > l- in type A syllables had not yet occurred in the transcriptional dialect.

Now let us turn to the second hypothesis. There are three comparisons weighing in favor of *r- > l- in the transcriptional dialect in type B syllables:

1. 旅 *rɑʔ > liɑᵇ 化 'change' (5d) : Bur. လဲ *lai* 'change v.' etc.
2. 陵 *rəŋ > lɨŋ 之 (16c, for meaning see 16c) : Tib. གླིང *gliṅ* 'continent, island, garden', etc.
3. 路 *rˤɑks > lɑᶜ 歸 'return' (18a). Bur. လာ *lā* 'come' or Tib. ལོག *log* 'return'

There are three comparisons weighing against the change *r- > l- in type B syllables: namely

1. 鱗 *rin > lin 長 'long' (13d) / 陵 *rəŋ > lɨŋ 長 'long' (44a) : Tib. རིང *riṅ*, etc.

2. 龍 *roŋ > lioŋ, *mrˤoŋ > mɔŋ 陜 'gorge, chasm' (36d), Tib. རོང་ *roṅ* 'ravine'

3. 理 *rəʔ > liə^{b} 百 'hundred' (40a), OBur. ရျာ *ryā*, etc.

Although technically the evidence in favor of *r- > l- in type B syllables is equal to the evidence against, the evidence in favor has problems (such as the conjectural nature of the meaning of Bailang 陵 *rəŋ > lɨŋ 之 [16c]), whereas the evidence against is rather straightforward. Thus, again on balance it is more likely *r- was maintained as *r- in the Chinese transcriptional dialect also in type B syllables.

Although in this discussion I give preference to those Trans-Himalayan cognates that point to *r- in Bailang, by no means are the cognate proposals that point to *l- necessarily invalid (including Bailang 僂 *roʔ/rˤo > lio^{b}/lo with Tib. ལྷོ *lho* 'south'). Within the Trans-Himalayan languages r : l correspondences are disorderly, as cognates Chi. 田 *den* < *lˤiŋ 'field', Tib. ཞིང་ *źiṅ* < *lʲiṅ, Th. *raŋ* 'field' and proto-Tani *rɯk (Sun 1993: 180)[55] (perhaps related to Bailang 陵 *rəŋ > lɨŋ 之 [16c]) and Bur. လာ *lā* 'come', Th. *rah* 'come' (perhaps related to Bailang 留 *ru > liu 來 'cause to come' [4d]). Only further research on the historical phonology of many languages will make the picture clearer.

Zhengzhang (1993: 15) compares 僂 *roʔ/rˤo > lio^{b}/lo 蠻 'southern barbarian' with Bur. လူ *lū* 'person'.

One may reasonably wonder whether 讓 *nɑŋs > ńɑŋ^{c} 夷 'barbarians' is related to the Tibetan word འཇང་ *ḫǰaṅ* [ndʒaŋ], referring in Old Tibetan to the Nanzhao kingdom.

11c. 龍 *roŋ > lioŋ, *mrˤoŋ > mɔŋ 貧 'poor'. See discussion at 11d.

11d. 洞 *dˤoŋs > doŋ^{c} 薄 'thin (= poor)'. Coblin notes that since Chinese 貧薄 is a binome 'poor', Bailang 龍洞 may also be a binome.

12a. 莫 *mrˤɑk > mæk, *mˤɑk > mɑk, *mˤɑks > mɑ^{c} 無 'have not'. See discussion at 4b.

12b. 支 *ke > kie > tśe 所 relative clause nominalizer. See discussion at 4c.

12c-d. 度由 *dˤɑk/dˤaks lu > dɑk/dɑ^{c} jiəu 報嗣 'repay, give in repayment'. Since the Chinese is a binome, the Bailang is also likely a binome (Coblin 1979: 188). Zhengzhang (1993: 15) compares the first word with OChi. 度 *dak* < *[d]ˤak (02-16/0801a) 'measure (v.)', a good phonetic match but not compelling semantically. As a cognate to the second word Coblin points to WBur. ရွေး *rweḥ* < OBur. *ruyḥ 'choose, select, redeem, ransom' (1979: 202). I am inclined to reject this comparison

55 Sun supports proto-Tani *rɯk 'swidden' with Bengni S *rɯk-pe:*, Bokar OY *a-rɯk*, and Padam-Mising L *a-rik* (1993: 221).

for several reasons. First, the Burmese word has quite wide semantics. Until philological study confirms that 'redeem' and 'ransom' are more conservative meanings, the semantics are not persuasive. Second, Burmese has initial r- in this word whereas Bailang has initial l- (or j-). The more secure comparisons to 淫 *ləm > jim 家 'home, family' (see discussion at 39d) suggest that *l- in type B syllables had already changed to j- by the time of the transcriptional Chinese dialect. Nonetheless, it is possible that the change *l > j- proceeded through several conditioned sub-changes, in which case it might be possible that in the transcriptional Chinese dialect 淫 has initial j- but 由 still retained initial l-. If one assumes that 由 did maintain initial l-, then Zhengzhang's (1993: 15) comparison with Bur. လှူ *lhū* 'donate, give' or Tib. བླུ་ *blu* 'to ransom' are more promising than WBur. ရွေး *rweḥ*.

13a. 陽 *lɑŋ > jɑŋ 願 'wish, desire'. This word also occurs at 44b. Coblin suggests that it may be cognate with 繩 *ləŋs > jɨŋ^{c}, *m-ləŋ > źɨŋ 慕 'long for' at 17a (1979: 189), a proposal which raises the question of whether Bailang distinguishes -ɑ- and -ə-. Two types of evidence bear on this question: 1. distinct readings of what are perhaps the self-same Bailang word, 2. Trans-Himalayan cognates of Bailang words that are transcribed with Characters that have OChi. *-ə- readings. The case at hand, viz. 繩 *ləŋs > jɨŋ^{c}, *m-ləŋ > źɨŋ 慕 'long for' (17a) ~ 陽 *lɑŋ > jɑŋ 願 'wish, desire' (13a, 14b) is the only instance of the former. In contrast, there are many examples of the latter, so many that it is helpful to organize them according to the final consonant implied by the proposed cognates.

Open syllables: There are three words transcribed as open syllables.

1. 衣 *ʔəi(s) > ʔɨi(^{c}) 風 '(wind =) custom' (5b). WBur လေ *le* < OBur *liy 'wind', Tan. [illegible] *ljɨ* < *lji [2302], Japhug Rgy. *qale*). The cognates point to *-i-.
2. 孳 *dzəs > dziə^{c} 慈 'loving' (28c). Chi. 慈 *dzi* < *dzə (04-49/0966j) 'kind adj.', Tib. མཛའ་ *mdzaḫ* 'love', Bur. စာ *cā,* Tan. [illegible] *dzu*^{1} < *ndə (1338). The cognates point to -ə-.
3. 理 *rəʔ > liə^{b} 百 'hundred' (40a). Chi. 百 *paek* < *pˤrak (02-37/0781a) 'hundred', Tib. བརྒྱ་ < OTib. བརྒྱའ་ *brgyaḫ* (PT 1111, l. 5 *et passim*) < *bryaḫ, OBur. ရာ *ryā*, Tan. [illegible] *.jir*^{2} < *r-ja (2798), Japhug Rgy. *ɣurʑa* <*wə-rja (Jacques 2014: 92). The cognates point to *-a-.

The cognates point to a different vowel in each of the three word. Taking the Han vowels as a point of departure, it is plausible that Bailang -ɨi- is cognate with -i- in other languages whereas Bailang -iə- is cognate with -ə- or -ɑ-.

In the word 'love' the transcriptional vowel -ə- matches the Chinese and pre-

Tangut cognates exactly, suggesting Bailang maintained a distinction between -ə- and -ɑ- in open syllables. If so, Bailang provides further evidence that Handel (2008) is incorrect in proposing the merger of -ə- and -ɑ- in all languages other than Chinese.

Nonetheless, in 'hundred' both Chinese and pre-Tangut have -ɑ-, distinct from the -ə- of Bailang. The two phonetic contexts are however not strickly speaking parallel because 'love' is *qusheng*, probably realized as -h in the transcriptional dialect, and 'hundred' is *shangsheng*, probably realized as ʔ in the transcriptional dialect. In addition, the possibility should be considered that the Bailang word for 'hundred' is not cognate with Chi. 百 *paek* < *pˤrak, Japhug Rgy. *ɣurʐa* etc. but instead with the bound Japhug Rgy. classifier *-ri* 'one hundred' and its cognates such as Pumi *-ɹɛj* (see Jacques 2017: 144).

A further apparent obstacle to the hypothesis that Bailang -ə- in open syllables corresponds to Chinese -ə- is the word 'mother' (Bailang 摸 *mˤɑ > mɑ 母 [28d], OChi. *məʔ). One is free to conclude either that Bailang does not distinguish -ɑ- and -ə-, in which case there is a need to explain why the Chinese transcriber choose the transcriptions he chooses, or that the quality of the vowel in the Chinese is innovative in this word.

Final labials: There are three words transcribed with final labials.

1. 潭 *lˤəm > dəm 甘 'sweet' (8b), Chi. 甜 *dem* < *lˤem (36-16/0621-) 'sweet', Tib. ཞིམ་ *źim* < *lʲim 'tasty', Tan. 𗂧 *ljij* < *lim [1079] 'bon à manger', Th. *rem* ~ *rim* 'beer drunk during the death ritual'. The cognates point to *-im or *-em.
2. 尋 *s-ləm > zim 和 'harmonious' (22c) ~ 潯 *s-ləm > zim 溫 'warm' (23b). Chi. 尋 *zim* <*sə-l[ə]m (38-17/0662a) 'warm up (food)', Bur. လုံ *luṃ* 'warm', Tan. 𗆐 *low²* < *lvm (0115) 'chaud', Jinghpaw *lum³³* 'tiède' (Jacques 2014: 198, cf. Xu et al. 1983). The cognates point to or are compatible with *-um.
3. 淫 *ləm > jim 家 'home, family' (39d). Chi. 窨 *'imH* < *q(r)[ə]m-s (653-) 'subterranean room', Tib. ཁྱིམ་ *khyim* 'home', Bur. အိမ် *im,* Tan. 𗵘 *.jij²* < *jim or *C-tɕim (2560), Situ Rgy. *tə-tɕîm*, Pumi *tɕə̃* (Jacques 2014: 186). The cognates point clearly to -im.

Among these words 'sweet' and 'home' point to the vowel -i-, and 'warm' points to -u-. It is noteworthy that nowhere in the transcription of the three Bailang poems is a characters used with an OChi. reading with the rime *-im. This fact points toward the absence of this rhyme in Bailang, and a Bailang internal change *-im > -əm.[56] One

56 Considering the likelihood that the transcriptional dialect was rather closer to Han Chinese than to Old

could suggest that Bailang also changed *-um as *-əm, but as Chinese would have no way to write /-um/ distinctly from /əm/ in this period (Baxter 1992: 551-552), it is equally possible that the Bailang word for 'warm' was *slum.

Final velars: There are four relevant words transcribed with final velars. One must remember that both Tibetan and Burmese merged -e- and -i- before velars (Dempsey's law), so the witness of Chinese cognates is particularly important in these cases.

1. 陵 *rəŋ > lɨŋ 之 (16c) Tib. གླིང་ *gliṅ* 'continent, island, garden', Chi. 田 *den* < *lˤiŋ (32-19/0362a), Tib. ཞིང་ *źiṅ* < *lʲiṅ 'field', Th. *raŋ* 'field'. The cognates point to *-i-.
2. 鱗 *rin > lin 長 'long' (13d) ~ 陵 *rəŋ > lɨŋ 長 'long' (44a). Tib. རིང་ *riṅ,* Bur. ရှည် *rhaññ* 'long' < *ˀriŋ, Tan. [illegible] zjir < *s-rje < *s-rjeN 'long' (Jacques 2014: 101). The cognates point to -i- or -e-.
3. 仍 *nəŋ > ńɨŋ 心 'heart' (28a). Chi. 仁 *nyin* < *niŋ (32-28/0388f) 'kindness', Tib. སྙིང་ *sñiṅ* 'heart', Bur. နှစ် *nhac* <*ˀnik 'kernel', Tan. [illegible] *njiij* < *njeej < *njeeN 'coeur', Japhug Rgy. *tɯ-sni*. The cognates generally point to *-i-.
4. 息 *sək > sɨk 木 'wood' (39a). Chi. 薪 *sin* < *si[ŋ] 'firewood' (32-33/0382n), Tib. ཤིང་ *śiṅ* 'wood', Bur. သစ် *sac* < *sik 'tree' (Lashi *sə:kH*), Tan. [illegible] sji^1 < *sje < *sjeN (4250) 'bois, arbre'.[57] The cognates point to *-i-.
5. 僧 səŋ 壽 'longevity' (13c). Tib. སྲོག་ *srog* 'life', Bur. ရှင် *rhaṅ* 'alive', Bur. သက် *sak* < *ˀsak 'life' (Lashi -*ˀsakH*), and Chi. ´ *sik* < *sək (05-29/0925a) 'breath'. The cognates point to -*ə- with some complications.

In four cases the cognates point to -i- and in the weakest case they point to -ə- Possible interpretations include: 1. Bailang changed *-iK to -əK (cf. Lashi *sə:kH* 'tree'), perhaps merging with inherited -əK, and the Chinese transcription faithfully reflects

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Chinese the coincidence of the Han reading 淫 /jim/ for 'home' with its Burmese and Tangut cognates suggests that this character was chosen precisely to match a pronunciation [im]. This proposal is untenable for two reasons. First, it draws the Bailang reading of 潯 'warm' further away from its putative cognates; to write *-um as -im is not acceptable if -əm were also available. Second, and more importantly, the Han vowel in 'sweet' is -ə-, so a proposed Bailang internal change *-im > -əm is still required. Thus, the suggestion that the vowels of the transcriptional dialect were close to the Han pronunciations in these three words, although tempting for 'home', creates more problems than it solves.

57 There is an inconsistency in Jacques' pre-Tangut reconstruction. Sometimes he suggests *eN changes to *-e (e.g. Tan. [illegible] *sji¹* < *sje < *sjeN [4250] 'bois, arbre', p. 100) and sometimes to *-ej (e.g. Tan. [illegible] *mjiij²* < *mjeej < *mjeeN [2639] 'nom', p. 169). Hill (2015: 194) proposes to instead reconstruct *sjiN and *mjeeN to match the vowels of Chinese 薪 *sin* < *si[ŋ] 'firewood' and Chi. 名 *mjieng* < *C.meŋ (09-31a/0826a).

the latter, 2. Bailang maintains -iK in 'field', 'long', 'heart' and 'wood', but the Chinese transcriptional dialect was unable to transcribe this as such, so settled for -əK as an approximation. In this case, one can either dismiss the cognate proposals associated with 僧 səŋ 壽 'longevity' (13c), supposing that the Bailang pronunciation was /siŋ/ or one can suppose that Bailang maintained -iŋ and -əŋ separately, with -əŋ in this word, the two sounds merging only in the transcription. The evidence of 'long' points toward the second proposal. In Chinese velar nasals and dental nasals are difficult to distinguish after the vowel -i-; the distinction was probably lost before the period of this poem (Baxter 1992: 423). Consequently, the alternative transcription 鱗 *rin is not evidence against Bailang *riŋ. It appears the Bailang is *riŋ, a syllable absent in the Chinese transcriptional dialect, which was transcribed once as 鱗 rin > lin with the correct vowel but an incorrect final, and once as 陵 rəŋ > lɨŋ with the correct final but an incorrect vowel.

Final -i: There are two words transcribed with final -i.

1. 存 *dzˤən > dzən (to be read /dzəi/) 熾 'glorious' (14d). Tib. མཚར་ *mtshar* 'fair, beautiful, bright', Chi. 粲 *tshanH* < *tsʰˤɑrs (25-40/0154b) 'bright and white'. Cognates point to -a-.
2. 洗 *sˤərʔ > sei^{b}/sen^{b} 厚 '(thick =) affluent' (20d). Tib. གསེར་ *gser* 'gold'. The cognate points to -e-.

A closeness of the Chinese transcriptional to Han Chinese rather than Old Chinese in this phonetic environment is capable of explaining the divergent vowels of the proposed cognates. A reading 洗 /sei^{b}/ is an excellent match to the proposed Tibetan cognate. The match between Bailang 存 /dzəi/ 熾 'glorious' (14d) and Chi. 粲 *tshanH* < *tsʰˤɑrs is not quite so good, as one would prefer to see -ə- in the Chinese cognate, but a correspondence between Bailang -ə- and Chinese -ɑ- is also met in 'hundred' (理 *rəʔ > liə^{b} 百 'hundred' [40a], Chi. 百 *pˤrak, Tan. [Tangut character] *.jir*^{2} < *r-ja (2798) [Jacques 2014: 92]). This passage suggests that the irregular phonetic development of 存 (i.e. *dzˤən > dzən and not dzen, see Baxter 1992: 431-432) took place in the history of the transcriptional dialect, and preceded the change of *-r > i (or -n in the dialect ancestral to MChi.).

This discussion permit the following tentative conclusions. The transcriptional dialect was closer to the Han reading for 衣 *ʔəi(s) > ʔɨi(ᶜ) 風 '(wind =) custom' (5b) and 洗 *sˤərʔ > sei^{b}/sen^{b} 厚 '(thick =) affluent' (20d) but closer to the OChi. reading for 淫 *ləm > jim 家 'home, family' (39d). It is unclear to what extent the Bailang difference between -ə- and -ɑ- reflects an inherited distinction—'love' (孳 *dzəs >

dziə^{c} 慈 'loving' [28c]. OChi. 慈 *dzə, Tan. 毳 *dzu^{1}* < *ndə strongly suggests that it is, but 'glorious' (存 /dzəi/ [14d], Chi. 粲 *tshanH* < *ts^{hʕ}ɑrs), 'hundred' (理 *rəʔ > liə^{b} [40a], OChi. 百 *p^{ʕ}rak, Tan. 䋕 *.jir^{2}* < *r-ja), and 'mother' (摸 *m^{ʕ}ɑ > mɑ[28d], OChi. *məʔ) do not. Even if Bailang -ə- is partly inherited one would not expect its value to match that of OChi. all the time. Bailang maintains a rime -iŋ, which the Chinese transcriber was ill equipped to handle, usually writing /əŋ/, but in one case /in/. Returning full circle to 繩 *ləŋs > jɨŋ^{c}, *m-ləŋ > źɨŋ 慕 'long for' (17a) and 陽 *lɑŋ > jɑŋ 願 'wish, desire' (13a, 14b), Coblin may well be right that these words are cognate, but it does not seem likely that they are two attempts to right the same word.[58] It is relevant to mention that there is some evidence that -ə- and -ɑ-, were considered to rhyme in Bailang (*vide infra*), but it would be premature to draw any conclusions from this evidence about Bailang phonology.

13b. 雒 *r^{ʕ}ɑk > lɑk 主 'ruler'. The possibly cognates Tib. ཇེ་ *rje* < *rlʲe 'lord' and Tamang *⁴kle* 'king' come to mind (see Jacques 2004), but because of the difference in Auslaut are probably to be rejected. Beckwith's speculation that transcriptional Chinese -k reflects Bailang -ʔ would improve these comparisons (2008: 94). Zhengzhang (1993: 15) compares Bur. ရှင် *rhaṅ* 'lord, master' and OChi. 良 *ljang* < *[r]aŋ (03-4/0735a) 'good'. This word recurs at 18d.

13c. 僧 səŋ[59] 壽 'longevity'. Coblin speculates that this word "may mean 'long life' or perhaps simply 'life'" (1979: 189). He compares WBur. ရှင *rhaṅ* 'alive' (1979: 209 note 68, also cf. Benedict 1979: 85 #404). If Coblin's suggested meaning is correct, one can instead, with Zhengzhang (1993: 15), propose Tib. སྲོག་ *srog* 'life', Bur. သက် *sak* < *ˀsak 'life' (Lashi -*ˀsakH*), and Chi. 息 *sik* < *sək (05-29/0925a) 'breath', although the velar nasal in Bailang is unexpected. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

13d. 鱗 *rin > lin 長 'long'. Compare Tib. རིང་ *riṅ,* Bur. ရှည် *rhaññ* 'long' < *ˀriŋ, Tan. 䋕

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58 For the convenience of the reader I also assemble those Bailang words that are transcribed with characters that have OChi. *-ə- readings without proposed Trans-Himalayan cognates and omitting obvious Chinese loans: 隗 *ŋ^{w}əi > ŋui 是 'this, that' (1c), 魏 *ŋ^{w}əi(s) > ŋui(^{c}) 與 'together with' (2a, 20a), 徵 *drəŋ > ḍɨŋ, *trəŋ > ṭɨŋ, *trəʔ > ṭiə^{b} 聞 'hear' (5a), 仍 *nəŋ > ńɨŋ 悉 'all' (10c). 歸 *k^{w}əi > kui 歷 'pass through' (25c), 微 *məi > mui 風 '(wind =) news, accounts' (33d), 側 *tsrək > tṣɨk !   'large stone' (?) (38c), 敕 *r̥ə > ṭ^{h}ɨk ⌊   'tribesmen' (43d), 服 *bək > buk, bəʔ > bu 發 'send forth, bring forth' (39c). For the last, Coblin in fact compares འཕྲོ་ *ḥphro* 'scatter, emanate' (1979: 209 note 40), but this comparison is not credible (see comm. to 39c).

59 This character is not used in early texts, but is first attested in the Han dynasty and is used to transliterate the first syllable of *saṃgha-;* it has no OChi. reading (see Shuessler 2009: 117).

zjir < *s-rje < *s-rjeN 'long', and with weaker but plausible semantics OChi. 引 *yinX* < *li[n]ʔ 'draw the bow' (Zhengzhang 1993: 15, Jacques 2014: 101). Ma & Dai offer further cognates (1982: 22-23). The same word appears as 陵 *rəŋ > lɨŋ 長 'long' at 44a. See discussion at 13a.

14a. 莫 *mrˤɑk > mæk, *mˤɑk > mɑk, *mˤɑks > mɑ^{c} 子 'son'. Bur. မက် *mak* 'son-in-law', Tib. མག་པ་ *mag-pa* 'bridegroom', Tan. [illegible] *mạ* < *S-mak (4820), Japhug Rgy. *tɤ-nmaʁ*. The comparisons suggest the character was not read *mˤɑks > mɑ^{c}, since this would be missing the final velar stop in the transcriptional dialect (see discussion at 4b), although it would perhaps be somewhat surprising for the transcriber to use one Chinese character intending two different readings in such a short span.

14b. 稚 *dris > ḍi^{c} 孫 'grandson'. Zhengzhang (1993: 15) compares WBur. မြေး *mreḥ* < OBur မ္လိယ်း *mliy* 'grandchild', which fits well his own reconstruction of 稚 as *ɦ'li.

14c. 角 *krˤok > kɔk 昌 'splendid'.

14d. 存 *dzˤən > dzən 熾 'glorious'. Tib. མཚར་ *mtshar* 'fair, beautiful, bright', Chi. 粲 *tshanH* < *tsʰˤɑrs (25-40/0154b) 'bright and white'. Baxter & Sagart's (2011) reconstruction 存 *dzwon* < *[dz]ˤə[n] (33-22/0432a) allows for a final *-r. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

15a-b. 僂讓 roʔ/rˤo nɑŋh > lio^{b}/lo ńɑŋ^{c} 蠻 'southern barbarian', 夷 'barbarians'. See etymological discussion at 11a-b. For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

15c. 皮 *bɑi > bɨæi 所 relative clause nominalizer. Dong "(1937: 4) suggests that the character 15c 皮 is a graphic error for 支 which corresponds to Chinese 所 in line 12" (Coblin 1979: 189).

15d. 尼 *nˤis > nei^{c}, *nri > ṇi 處 'dwell'. OBur. နိယ် *niy* 'stay' (Zhengzhang 1993: 18).

16a. 且 *tsˤɑʔ > tsɑ^{b} 日 'sun'. The word also occurs at 18b. Relying on Benedict (1972: 47 #187), Coblin proposes the cognates Bahing *tśyar*, Jinghpaw *dźan*, and Garo *sal* (1979: 210 note 86). Coblin (1979: 200) also cites a Lolo-Burmese reconstruction of Bradley *tsa^{1} 'sunshine' (Bradley 1975: 126 #338), based on such forms as Lahu *cha:* and Akha *u̬ tsaˇ* (cf. Bradley 1979: 326, #338A).

16b. 交 *kˤrɑw > kæu 入 'enter (= set, go down)'. Compare OBur. က္လ *kla* 'fall' and OChi. 落 *lak* < *kə.rˤak (02-01/0766q') 'fall (v.)' (Zhengzhang 1993: 18).

16c. 陵 *rəŋ > lɨŋ 之 possessive or attributive particle. Noting that at 29c the Chinese morpheme 之 is borrowed directly into Bailang, Coblin wonders whether here the Bailang syllable 陵 *rəŋ > lɨŋ does not form a compound with the following syllable 悟 *ŋˤɑs > ŋɑ^{c} 部 'sector' at 16d (1979: 189). Coblin suggests comparison with Tib. གླིང་

gliṅ 'continent, island, garden' (1979: 200), if his speculation is correct, one can further propose Chi. 田 *den* < *lˤiŋ (32-19/0362a), Tib. ཞིང་ *źiṅ* < *lʲiṅ 'field', Th. *raŋ* 'field', and proto-Tani *rɯk (see note 55 above). Zhengzhang (1993: 18) repeats Coblin's Tibetan comparison and also suggests WBur. ကြည်း *kraññḥ* 'land' and OChi. 陵 *ling* < *[r]əŋ (06-17/0898c) 'mound, hill' as cognates. Note that the medial -l- in Tibetan does not match the (-)r- of Burmese and Chinese. For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

16d. 悟 *ŋˤɑs > ŋɑ^{c} 部 'sector'. Coblin compares Tib. ངོ་ *ṅo* 'face' and ངོས་ *ṅos* 'surface, side' (1979: 202). Jacques further proposes Japhug Rgy. *tɯ-rŋa* 'face' and either Tan. [illegible] *ŋwər^{2}* (3158) or [illegible] *njijr^{2}* (1204) as cognates of Tib. ངོ་ *ṅo* 'face' (Jacques 2014: 163). Zhengzhang (1993: 18) compares the Bailang words with 峨 *nga* 'lofty' (18-05/0002k), a word that Baxter & Sagart (1014b) do not reconstruct, for which Schuessler (2009: 212) offers *ŋˤai. Also see discussion at 16c.

17a. 繩 *ləŋs > jɨŋ^{c}, *m-ləŋ > źɨŋ 慕 'long for'. Coblin suggests that this word may be cognate with 陽 *lɑŋ > jɑŋ 願 'wish, desire' at 13a and 44b (1979: 189). Zhengzhang (1993: 18) compares Bur. ရည် *raññ* < *riŋ 'aim at', Tib. ཞེན་ *źen* <*lʲen or *rʲen 'desire, yearn for', and OChi. 憐 *len* < *rˤiŋ (32-26/0387l) 'love, pity'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

17b. 動 *dˤoŋʔ > doŋ^{b} 義 'righteousness'. Coblin compares Tib. དྲང་པོ་ *draṅ-po* 'straight, sincere, upright' (1979: 202).

17c. 隨 *s-wɑi > zyæi 向 'face toward, incline toward'. The phrase 隨旅 s-wɑi rɑʔ > zyæi liɑ^{b} 'face toward the civilizing influence also occurs at 5a-b.

17d. 旅 *rɑʔ > liɑ^{b} 化 '(change =) civilizing influence'. The phrase 隨旅 *s-wɑi rɑʔ > zyæi liɑ^{b} 'face toward the civilizing influence also occurs at 5a-b.

18a. 路 *rˤɑks > lɑ^{c} 歸 'return'. Keeping in mind that *ks had reduced to -h in the transcriptional dialect (see discussion at 4b), compare လာ *lā* 'come'.[60] However, if this word had a *rusheng* reading in the transcriptional dialect (see discussion at 38b) comparison with Tibetan ལོག་ *log* 'return' is perhaps more appropriate. For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b. The word 路 *rˤɑks > lɑ^{c} 歸 'return' also occurs at 28b and 35c.

18b. 且 *tsˤɑʔ > tsɑ^{b} 日 'sun'. See discussion at 16a.

18c. 揀 *tˤoŋʔ > toŋ^{b} 出 'come out'. Neither Schuessler (2009) nor Baxter & Sagart

60 For another language with r- rather than l- in 'come' compare Th. *rah* 'come'.

(2014b) offer reconstructions of this word. This reconstruction is supplied on the basis of Coblin's reading (1979: 190) and the *xiesheng* series. Coblin compares the Tibetan verb pres. འདོན་ *ḫdon*, past བཏོན་ *bton*, fut. གདོན་ *gdon*, imp. ཐོན་ *thon* 'take out' (1979: 209: note 47). Perhaps a more straightforward comparison is this verb's intransitive partner ཐོན་ *thon* 'come out', e.g. *ṅa-raṅ-gi dpe-cha rnams khyer-te/ yum-la yaṅ ma źus-par thon phyin-pas/* 'I put together my books, came out and left, even without telling the lama's wife' (*Mila*, de Jong 1959: 68). Nonetheless, the correspondence of Bailang -oŋ with Tibetan -*on* is perhaps a problem. Zhengzhang (1993: 18) compares WBur. ထွက် *thwak* 'come out'; the correspondence of -oŋ with -wak < *-ok is also not superb.

18d. 雒 *rˤak > læk 主 'ruler'. See discussion at 13b.

19a. 聖 *l̥eŋs > śeŋ^{c} 聖 'sage'. A loan from Chinese.

19b. 德 *tˤək > tək 德 'virtue'. A loan from Chinese. Also occurs at 27d.

19c. 渡 *dˤɑks > dɑ^{c} 恩 'kindness'. Coblin tentatively identifies this word with 度 *dˤɑk > dɑk, *dˤɑks > dɑ^{c} 富 'rich' at 20c, "both possibly meaning 'thick'" (1979: 190). For the phonology he compares Tib. མཐུག་པ་ 'thick' and Bur. ထိုက် *thuik* (1979: 210 note 100) and for the semantics 厚 *hòu* "thick, substantial, rich, generous, kind" (1979: 190). The identification of the two Bailang words may be correct, but the proposed cognates are not. The Bailang word has a different main vowel from the Tibetan comparison. The Burmese comparison I have difficulty confirming. Perhaps Judson's ထိုက်ထိုက် *thuik thuik* 'short, stunted' (1893: 539) is intended. In any event, the Burmese word is unlikely to be cognate to the Tibetan; most researchers believe that the rime -*uik* in Burmese is indicative of loans (Luce 1985: vol. I, 100, Pulleyblank 1963: 217). Zhengzhang (1993: 18) compares OChi. 度 *duH* < *[d]ˤak-s 0801a 'measure (n.)', a perfect phonological match, but semantically weak. He also proposes that this Chinese word is cognate to Bailang 度 at 12c; he thus implies that 度 (at 12c and 20c) and 渡 both transcribe the same Bailang word, perhaps with a *Gesamtbedeutung* 'largess'.

19d. 諾 *nˤɑk > nɑk 深 'deep'. Bur. နက် *nak* 'deep' (cf. Ma & Dai 1982: 22, Zhengzhang 1993: 18), Tan. [illegible] *na* < *nak (4693), Japhug Rgy. *rnaʁ* (Jacques 2014: 131-132).

20a. 魏 *ŋ^{w}əi(s) > ŋui(^{c}) 與 'together with' also occurs at 2a.

20b. 菌 *gunʔ > guɨn^{b} 人 'people, men'. Compare Tib. ཀུན་ *kun* 'all' (see Hill 2007: 481-482), Bur. အကုန် *akun* < *gun 'all'.[61] In the transcriptional Chinese dialect -u- had already broken to -uə- before dentals (cf. note 21). The same Bailang word is glossed 部

61 Zhangzheng (1993: 18) instead compares Tib. ཁོལ་ *khol* 'servant', OBur. ကျောန် *kyo$_{1}$n* 'slave', and 倌 *kwaenH* < *k^{wʕ}ra[n]-s (25-01/0157l) 'servant, groom'.

'tribe' at 24a and 同 'some, together' at 41c.

20c. 度 *dˁɑk > dɑk, *dˁɑks > dɑᶜ 富 'rich'. Compare Tib. བདག་ *bdag* 'own', which weighs in favor of the *rusheng* reading. Zhengzhang (1993: 18) compares Bur. ထက် *thak* 'sharp, keen, powerful'.

20d. 洗 *sˁərʔ > seiᵇ/senᵇ 厚 '(thick =) affluent'. Perhaps related to Tib. གསེར་ *gser* 'gold'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

21a. 綜 *tsˁuŋs > tsouŋᶜ 冬 'winter'. Coblin (1979: 200), Ma & Dai (1982: 23), and Zhengzhang (1993: 18) compare WBur. ဆောင်း *choṅḥ* < *tsuŋḥ 'cool season'. Jacques compares this Burmese word to Tan. 𗼃 *tsur* < *r-tso (1490) 'hiver' and Japhug Rgy. *qartsɯ*, but the correspondence of the rimes is unexpected (Jacques 2014: 67). Ma & Dai's (1982: 24) comparison to Jinghpaw $n^{31}ʃuŋ^{33}$ (from $niŋ^{31}ʃuŋ^{33}$ acc. to Xu et al. 1983) also merits mention. Zhengzhang also compares Chinese 冬 *towng* < *tˁuŋ (15-03/1002a) 'winter', which is perhaps possible despite the irregular initial correspondence.

21b. 邪 *jɑ > jæ, *s-lɑ > ziæ, *s-lɑ > ziɑ 多 'much'. Also occurs at 7a, 22b and 24c.

21c. 流 *ru > liu 霜 'frost'. Zhengzhang (1993: 18) compares Bur. မြူ *mrū* 'haze'.

21d. 藩 *pɑr (cf. note 38) > puɑn 雪 'snow'. Compare Tan. 𗋽 *.wji̱* < *C-S-pja (4091) 'neige' and Japhug Rgy. *tɤ-jpa.* According to Jacques there are cognates in Lolo-Burmese languages (2014: 87). On the basis of Bradley's comment that there “is a word for snow even in many languages now spoken too far south to see it, and used instead for hail” (1979: 29), one can presume that Jacques has in mind Bradley's $*wa^2$ 'hail', reconstructed on the basis of Lahu *va*ˇ and Lisu $wa^5(ma^4)si^5$ (1979: 324-325, #325).[62] Ma & Dai offer related forms in further languages (1982: 23). Perhaps comparison with Chi. 皤 *ba* < *[b]ˁar (24-54/0195r) ‘white, white-haired’ and Mizo *vār* ‘white’ is not unreasonable.

22a. 莋 *dzˁɑk > dzɑk 夏 'summer'.

22b. 邪 *jɑ > jæ, s-lɑ > ziæ, s-lɑ > ziɑ 多 'much'. Also occurs at 7a, 21b and 24c.

22c. 尋 *s-ləm > zim 和 'harmonious'. Probably the same word as 潯 *s-ləm > zim 溫 'warm' at 23b (Coblin 1979: 191, Zhengzhang 1993: 19). On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

22d. 螺 *rˁoi > luɑi 雨 'rain'. Chi. 雨 *hjuX* < *C.ɢʷ(r)ɑʔ (01-26/0100a), Bur. ရွာ *rwā* 'rain' (see Ma & Dai 1982: 23, Zhengzhang 1993: 19). Remember *-o- had already broken to -uɑ- before dentals (and -j) in the Chinese transcriptional dialect (cf. note 21).

62 It is unclear what Bradley intends by the use of parentheses in the Lisu form.

Consequently, 螺 should be understood as /rˤuai/. Also see discussion at 11a-b.

23a. 藐 *mrˤɑuk > mɔk > maewk 寒 'cold'.

23b. 潯 *s-ləm > zim 溫 'warm'. Chi. 尋 *zim* <*sə-l[ə]m (38-17/0662a) 'warm up (food)', Bur. လုံ့ *luṃ* 'warm', Tan. *low*^{2} < *lvm (0115) 'chaud'[63], Jinghpaw *lūm* 'tiède' (Jacques 2014: 198).[64] Probably the same word as 尋 *s-ləm > *zim* 和 'harmonious' at 22c (Coblin 1979: 191, Zhengzhang 1993: 19). The proposed cognates show that the transcriptional dialect must have preserved the sl- cluster of Old Chinese. The comparison of Bailang 蘇 *sŋˤɑ > sɑ 肉 'meat' (9c) to Tib. ཤ་ *śa* 'flesh', etc. shows that in other cases s- initial clusters had simplified. On the development of laterals in the Chinese transcriptional dialect see the discussion at 39d. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

23c. 瀘 *rˤɑ > lɑ 時 'time, season'. Perhaps related to Tib. རེ་ *re* as in རེ་ཤིག་ *re śig* 'one time'. For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

23d. 漓 *rɑi > liæi 適 'suitable, in balance'. See discussion at 10d.

24a. 菌 *gunʔ > guɨn^b 部 'tribe'. The same word is glossed 人 'people, men' at 20b.

24b. 補 *pˤɑʔ > pɑ^b 人 'person'. Chi. 夫 *-pa (as in 田夫 *lˤiŋ-pa 'farmer', cf. 田 *lˤiŋ 'field'), Tib. པ་ *-pa* (as in ཞིང་པ་ *źiṅ-pa* 'farmer', cf. ཞིང་ *źiṅ* < *lʲiṅ 'field'). See LaPolla (2003: 27).

24c. 邪 *jɑ > jæ, s-lɑ > ziæ, s-lɑ > ziɑ 多 'much'. Also occurs at 7a., 21b. and 22b.

24d. 推 *tʰˤui > tʰuəi, tʰui > tśʰui 有 'have'. In the transcriptional Chinese dialect -ui had already broken to -uəi (cf. note 21).

25a. 辟 *bˤek > bek, bek > biek, pek > piek 涉 'traverse'. Compare Limbu *pekma* 'go' (Michailovsky 2002). Zhengzhang (1993: 19) compares OBur. ပ္လိယ်း *pliyḥ* 'run', which seems unlikely.

25b. 危 *ŋoi > ŋyæi 危 'danger'. A loan from Chinese.

25c. 歸 *kʷəi > kui 歷 'pass through'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

25d. 險 *ŋ̊rɑmʔ >hɨæm, ŋ̊rɑmʔ > hɨɑm 險 'peril'. Zhengzhang (1993: 19) compares Tib. *ṅam*, a word that appears to only occur in the compound ངམ་གྲོག་ *ṅam-grog* 'ravine, canyon'. A loan from Chinese appears more likely, in particular as Baxter & Sagart (2014b) reconstruct 險 *xjaemX* < *qʰr[a]mʔ (36-06/0613f) 'precipitous, dangerous', without the velar nasal initial. This word also occurs at 36c.

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63 In the pre-Tangut reconstruction 'v' in this context means a “voyelle autre que i” (Jacques 2014: 193).

64 Bodman suggests comparing Tib. གཏུམ་ *gtum* 'fierce, hot, angry', reconstructing *gl̥um (1980: 539).

26a. 莫 *mrˁɑk > mæk, mˁɑk > mɑk, mˁɑks > mɑ^{c} 不 'not (verbal negative)'. See discussion at 4b.

26b. 受 *duʔ > dźu^{b} 遠 'consider to be (too) far'. Zhengzhang (1993: 19) compares WBur. စိုး *cuiḥ* 'worry', OChi. 愁 *dzrjuw* < *[dz]riw (13-57/1092i) 'grieved'.

26c. 萬 *mˁɑns > muɑn^{c} 萬 'ten thousand'. A Chinese loanword.

26d. 柳 *ruʔ > lui^{b} 里 'li'. A Chinese loan of 里 liX < *rəʔ (04-35/0978a) 'measure of distance'. It is odd that in a loanword the Bailang vowel would not match the Chinese vowel.

27a. 術 *m-lut > źuit 去 'depart from; cast away'. Zhengzhang (1993: 19) compares Tib. རུད་ 'crumble, collapse'.

27b. 疊 *lˁep > dep 俗 'vulgar, common'. Zhengzhang (1993: 19) compares Bur. ထုံး *thuṃḥ* 'custom, tradition'. I am tempted to compare Tib. ལེབ་ *leb* 'flat', itself cognate to OBur. ကླပ် *klap* 'kyat'.

27c. 附 *boh > buo^{c} 歸 'return to'. Zhengzhang (1993: 19) compares Bur. ပူး *pūḥ* 'be close together, bring together' and OChi. 附 *bjuH* < *N-p(r)oʔ-s (10-39/0136k) 'be attached to'.

27d. 德 *tˁək > tək 德 'virtue'. A Chinese loanword. Also occurs at 19b.

28a. 仍 *nəŋ > ńɨŋ 心 'heart'. Chi. 仁 *nyin* < *niŋ (32-28/0388f) 'kindness', Tib. སྙིང་ *sñiṅ* 'heart', Bur. နှစ် *nhac* <*ˀnik 'kernel',[65] Tan. [illegible] *njiij* < *njeej < *njeeN 'coeur', Japhug Rgy. *tɯ-sni* (cf. Ma & Dai 1982: 23-24 and Zhengzhang 1993: 19). Note that for this word Bailang patterns with Tibetan in having a velar nasal final rather than a velar stop final, but in the word 息 *sək > sɨk 木 'wood' (39a) the velar stop final of Bailang patterns with the Burmish languages (Bur. သစ် *sac* < *sik 'tree', Lashi *sə:kH*) against the velar nasal of other languages (Chi. 薪 *si[ŋ] 'firewood', Tib. ཤིང་ *śiṅ* 'wood', Tan. [illegible] sji^{1} < *sje < *sjeN [4250] 'bois, arbre'). On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

28b. 路 *rˁɑks > lɑ^{c} 歸 'return'. See discussion at 18a.

28c. 孳 *dzəs > dziə^{c} 慈 'loving'. Chi. 慈 *dzi* < *dzə (04-49/0966j) 'kind adj.', Tib. མཛའ་ *mdzaḥ* 'love', Bur. စာ *cā,* Tan. [illegible] *dzu^{1}* < *ndə (1338). Zhengzhang (1993: 19) sees as a Chinese loan, a very unlikely possibility. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

28d. 摸 *mˁɑ > mɑ 母 'mother'. Chi. 母 *muwX* < *məʔ (04-64/0947a) 'mother', Tib. མ་ *ma,*

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65 Although the linguistics literature often cites a word နှစ် *nhac* 'heart' (e.g. Matisoff 2003: 480). In fact, the Written Burmese word for 'heart' is နှလုံး *nha-luṃ* and there is another word အနှစ် *anhac* 'kernel, core'. One may plausibly speculate that နှလုံး *nha-luṃ* was once spelled **nhac-luṃ* but I have not confirmed this.

Bur. မ *ma*. Zhengzhang (1993: 19) sees as a Chinese loan, a very unlikely possibility.

29a-b. 荒服 *m̥ˤɑŋ bək / bəʔ > huɑŋ buk / bu^{b} 荒服 'Huāngfù region'. A loan from Chinese.

29c. 之 *tə > tɕə > tɕɨ 之, a possessive or attributive particle, perhaps a Chinese borrowing (Zhengzhang 1993: 64).

29d. 儀 *ŋɑi > ŋɨæi 外 'outside'. Zhengzhang (1993: 64) sees as a borrowing from Chi. 外 *ngwajH* < *[ŋ]ʷˤa[t]-s 'outside', a distinct possibility.

30a. 犁 *rˤi > lei, *ri > li 土 'earth, soil'. Chi. 地 *dijH* < *lˤej-s (18-09/0004b')[66], Tib. གཞི *gźi* < *glʲi 'ground', OBur. မ္လိယ် *mliy*, Tan. [illegible] *mjij* < *mjej (2370) (cf. Zhengzhang 1993: 64). For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

30b. 籍 *dz(ˤ)ak > dziak 地 'earth'.

30c. 憐 *rˤin > len 墝 'hard, stony'. Zhengzhang (1993: 64) compares Tib. རེང་ *reṅ* 'stiff'.

30d. 憐 *rˤin > len 埆 'hard, stony'.

31a. 阻 *tsrɑʔ > tʂæ^{b} 食 'eat'. Ch. 咀 *dzjoX* < *dzaʔ (0046u), Tib. ཟ་ *za* < *dza (Schiefner's law) 'eat', Bur. စား *cāḥ* <*dzāḥ (Lashi *tsɔ:*), Tan. [illegible] *dzji* < *ndzja (4517), Japhug Rgy. *ndza* (cf. Ma & Dai 1992: 23-24, Zhengzhang 1993: 64).

31b. 蘇 *sŋˤɑ > sɑ 肉 'meat'. See discussion at 9c.

31c. 邪 *jɑ > jæ, *s-lɑ > ziæ, *s-lɑ > ziɑ 衣 'wear'.

31d. 犁 *rˤi > lei, *ri > li 皮 'skin'. Coblin (1979: 210 note 83) and Zhengzhang (1993: 64) compare WBur. အရေ *a-re* < OBur. *a-riy 'skin'; also compare Tan. [illegible] *dʑjɨ* < *ndri < *nri (1153), Japhug Rgy. *tɯ-ndʐi*, and Pumi *rə̂* (cf. Jacques 2014: 162). For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

32a. 莫 *mrˤɑk > mæk, *mˤɑk > mɑk, *mˤɑks > mɑ^{c} 不 'not (verbal negative)'. See discussion at 4b.

32b. 碭 *lˤɑŋs > dɑŋ^{c} 見 'see'. See discussion at 6b.

32c. 粗 *tsʰˤɑ > tsʰɑ 鹽 'salt'. OChi. 鹾 dza < *N-[ts]ˤaj (18-13/0005m) 'salt', Tib. ཚྭ *tshwa*, Bur. ဆား *chāḥ* < *tsāḥ (Lashi *tshoH*) (also cf. Ma & Dai 1982: 24, Zhengzhang 1993: 64), Tan. [illegible] *tshjɨ* < *tshji or *tshjvC (5186), the "correspondance … est absolument irrégulière" (Jacques 2014: 164). This is more likely a *Wanderwort* than genuine cognate among these languages.

32d. 沐 *mˤok > mok 穀 'grain'. Coblin compares Tib. འབྲུ *ḥbru* < *ḫmru (Simon's law) 'grain' and Bur. မျိုး *myuiḥ* 'type, class' (1979: 200 note 61, cf. Benedict 1972: 43

66 Bodman reports that 地 has an addition reading *lˤis that makes the correspondence regular (1980: 99).

#150). Zhengzhang (1993: 64) omits the Tibetan comparison but adds Chi. 麰 *mjuw* (13-77/1110d) 'barley', which Baxter & Sagart (2014b) do not reconstruct, but which Schuessler (2009: 184) reconstructs *mu. These comparisons are not compelling, either with the Bailang word or with each other.

33a. 罔 *mɑŋʔ > muɑŋ^{b} 吏 'official'. Also occurs at 3a.

33b. 驛 *lɑk > jæk ~ jɑk 譯 'translator'. Also occurs at 3b.

33c. 傳 *dron > ḍyæn 傳 'transmit'. Also occurs at 43a.

33d. 微 *məi > mui 風 '(wind =) news, accounts'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

34a. 是 *deʔ > dźe^{b} 大 'great'. See discussion at 1a.

34b. 漢 *hˤɑrs > hɑn^{c} 漢 'Han'. See discussion at 1b.

34c. 夜 *jɑks > ja^{c} 安 'peaceful'.

34d. 拒 *gɑʔ > gɨɑ^{b}, kʷɑʔ > kyɑ^{b} 樂 'happy'. See discussion at 9b.

35a. 蹤 *tsoŋ > tsioŋ 擕 'take by the hand'. WBur. ဆောင် *choṅ* (-oṅ < *-uṅ) 'carry' (Zhengzhang 1993: 64), Tib. √zuṅ < *dzuŋ (pres. འཛིན་ *ḥdzind*) 'take'.

35b. 優 *ʔu > ʔu 負 'carry on the back'. Tan. 𗼃 .u (2847) 'porter'.

35c. 路 *rˤɑks > lɑ^{c} 歸 'return'. See discussion at 18a.

35d. 仁 *nin > ńin 仁 'humaneness'. A loan from Chinese.

36a. 雷 *rˤui > luəi 觸 'encounter, butt into'. Zhengzhang (1993: 65) proposes comparison with Bur. လူး *lūḥ* 'daub, put on, toss, writhe'.

36b. 折 *dˤe > de, *det > dźat, *tet > tśat 冒 'risk, brave'.

36c. 險 *ŋ̊rɑmʔ >hɨæm^{b}, *ŋ̊rɑmʔ > hɨɑm^{b} 險 'precipitous'. Also occurs at 25d.

36d. 龍 *roŋ > lioŋ, *mrˤoŋ > mɔŋ 陜 'gorge, chasm'. Compare WBur. မြောင်း *mroṅḥ* (N.B. *mr-* < *mr- or *ml-) 'ditch, trench' and Tib. རོང་ *roṅ* 'ravine' (Zhengzhang 1993: 65). For the Tibetan, Coblin proposes ཀླུང་ *kluṅ* 'stream, valley', which matches less closely both in phonology and semantics (1979: 209 note 60). For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

37a. 倫 *run > luin 山 'mountain'. In the transcriptional Chinese dialect -u- had already broken to -uə- before dentals (cf. note 21). Beckwith implausibly proposes Tib. རི་ *ri* 'mountain' as a cognate (2008: 107).

37b. 狼 *rˤɑŋ > lɑŋ 高 'high'. Coblin (1979: 209 note 67, also cf. Benedict 1972: 43 note 140) and Zhengzhang (1993: 65) compares OBur. မြင့် *mraṅ?* 'high'; compare Tan. 𗒹 *bjij*[1] < *mbjaŋ < *mbrjaŋ < *mrjaŋ, and Japhug Rgy. *mbro* (Jacques 2014: 176-177). Ma & Dai (1982: 24) identify the Bailang word with 山 'mountain', and offer comparisons such as Jinghpaw *laŋ*[31] (also cf. Xu et al. 1983). For the development of

rhotics in the Chinese transcriptional dialect see the discussion at 11a-b.

37c-d. 藏幢 *dzˁɑŋ *drˁoŋ > dzɑŋ ḍɔŋ, *dzˁɑŋh *drˁoŋ > dzɑŋ^{c} ḍɔŋ 岐 'precipitous'. Coblin (1979: 200) and Zhengzhang (1993: 65) compare the first word with Tib. གཙང་གཙོང་ *gtsaṅ-gtsoṅ* 'steep, rugged, mountainous'. Zhengzhang (1993: 65) adds WBur စွင့် *cwaṅ?* (< *dzoŋʔ) 'lofty' and compares the second word with WBur. ထောင် *thoṅ* (N.B. -*oṅ* < *uṅ) 'set upright, raise up'.

38a. 扶 *bɑ > buɑ, *p^{h}ɑ > p^{h}ɑ, *pɑ > puɑ 緣 'follow along the edge'.

38b. 路 *rˁɑks > lɑ^{c} 崖 'cliff, precipice'. Tib. བྲག་ *brag* 'cliff'. The early date of cluster simplification (see discussion at 4b) suggests that this character was read /rah/ in the transcriptional dialect, in which case the comparison with the Tibetan is not compelling. However, the identification of Turkic *qïngïraq* with the Xiongniu sword called transliterated 徑路 in the *Hanshu* (and 輕呂 in the *Yi Zhoushu*) suggests that 路 may have had a *rusheng* reading *rˁɑks > lɑk (see Pulleyblank 1962: 222, Schuessler 2014: 253, and de la Vaissière 2003: 129). Zhengzhang (1993: 65) accepts the *qusheng* reading and compares Tib. ལ་ *la* 'mountain pass'.

38c. 側 *tsrək > tṣɨk ! 'large stone' (?). On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

38d. 祿 *rˁok > lok 石 'stone'. Coblin (1979: 200) proposes OBur. ကျောက် *klok*, Lashi *lūk*, Mikir *lòk,* Ahi *lu*^{44} as cognates; Ma & Dai (1982: 24) repeat the Burmese comparison and offer additional apparently related words in other languages. In addition to the Burmese form, Zhengzhang (1993: 65) also compares OChi. 礫 *lek* < *[r]ˁewk (17-28/1125j) 'pebbles'. See discussion at 11a-b.

39a. 息 *sək > sɨk 木 'wood'. Chi. 薪 *sin* < *si[ŋ] 'firewood' (32-33/0382n), Tib. ཤིང་ *śiṅ* 'wood', Bur. သစ် *sac* < *sik 'tree' (Lashi *sə:kH*), Tan. 蕤 sji^{1} < *sje < *sjeN (4250) 'bois, arbre' (also cf. Ma & Dai 1982: 24, Zhengzhang 1993: 65). For the potential import of this word in the sub-grouping of Bailang within the Trans Himalayan family see discussion at 28a. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

39b. 落 *rˁɑk > lɑk 薄 'thicket'.

39c. 服 *bək > buk, bəʔ > bu 發 'send forth, bring forth'. Coblin compares འཕྲོ་ *ḫphro* 'scatter, emanate' (1979: 209 note 40). The lack of final -g in Tibetan and medial -r- in Bailang are both problems for such a comparison. Zhengzhang (1993: 65) compares Bur. ပစ် *pac* 'throw, shoot'.[67] On the development of OChi. *-ə- in the Chinese

67 One may perhaps see here a word related to Bailang 辟 *bˁek > bek, bek > biek, pek > piek 涉 'traverse' (25a) and compare Limbu *pekma* 'go' (Michailovsky 2002), as above.

transcriptional dialect see discussion at 13a.

39d. 淫 *ləm > jim 家 'home, family'. Chi. 窨 *'imH* < *q(r)[ə]m-s (653-) 'subterranean room', Tib. ཁྱིམ་ *khyim* 'home', Bur. အိမ် *im* (cf. Ma & Dai 1982: 24, Zhengzhang 1993: 65), Tan. 𗥃 *.jij²* < *jim or *C-tɕim (2560), Situ Rgy. *tə-tɕîm*, Pumi *tɕə̃* (Jacques 2014: 186). These comparisons ensure that *l- in type B syllables had already changed to j- by the time of the Chinese transcriptional dialect. However, the comparison of Bailang 潭 *lˤəm > dəm 甘 'sweet' (8b) with Chi. 甜 *dem* < *lˤem (36-16/0621-) 'sweet' etc. shows that type A *lˤ- had not yet changed to *d*- in the transcriptional Chinese dialect, and the comparison of Bailang 潯 *s-ləm 溫 'warm' (23b) to Bur. လုံ *luṃ* 'warm' etc. means that *s-l- had not yet become *z*- in the transcriptional dialect. These pieces of evidence support Baxter & Sagart claim that *l- > *y*- "was the first to occur" (2014a: 109 also cf. Sagart 1999: 30-31).[68] On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

40a. 理 *rəʔ > liəᵇ 百 'hundred'. Chi. 百 *paek* < *pˤrak (0781a) 'hundred', Tib. བརྒྱ་ < OTib. བརྒྱའ་ *brgyaḫ* (PT 1111, l. 5 *et passim*) < *bryaḫ, OBur. ရာ *ryā*, Tan. 𗰗 *.jir²* < *r-ja (2798), Japhug Rgy. *ɣurʑa* <*wə-rja (Zhengzhang 1993: 65, Jacques 2014: 92). Beckwith sees the Bailang form as particularly close to Lolo-Burmese (2008: 95, 107), but this is because he follows Matisoff (2003) in projecting the epenthetic -g- of the Tibetan form into the proto-language. According to Li's law this -g- is an Tibetan innovation (Li 1959). Recall that the Bailang word for 'hundred' is potentially better compared to the bound Japhug Rgy. classifier *-ri* 'one hundred' and its cognates, such as Pumi *-ɻɛj* (see Jacques 2017: 144), rather than to Japhug Rgy. *ɣurʑa* <*wə-rja and its cognates given immediately above. For the development of rhotics in the Chinese transcriptional dialect see the discussion at 11a-b. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

40b. 曆 *rˤek > lek 宿 'overnight stay'. Chi. 夜 *yaeH* < *N.rak-s (0800j) 'night', Tib. ཞག་ *źag* < *rʲak 'day', OBur. ရက် *ryak* 'day' (Zhengzhang 1993: 65), Tan. 𗼻 .jaar² < *r-jaak (0811), Japhug Rgy. *tɤ-rʑaʁ* 'une nuit' (cf. Jacques 2014: 135 for discussion of the Japhug form).

40c. 髭 *tse > tsie 到 'reach, arrive at'. Zhengzhang (1993: 65) compares OChi. 至 *tsyijH*

68 Sagart (1999: 31) points out that in the 後漢書 *Hòu Hànshū*, the same text that preserves the Chinese translations of these poems, the Japanese word Yamato is transcribed 邪馬台 *zjae-maeX-doj*. If the initial 邪 *zjae* which suggests the lateral cluster *s-l- had already changed. However, Baxter and Sagart now reconstruct a uvular origin *sə.ɢA for 邪 *zjae*, so this observation is not of direct relevance for the dating of changes to laterals.

< *ti[t]-s (29-15/0413a) 'arrive'.

40d. 雒 *rˤɑk > lɑk 洛 'Lo-yang'. A loan from Chinese 洛 *rˤɑk > lɑk. Coblin notes that both characters are used to spell this word in Chinese.

41a. 捕 *bˤɑs > bɑᶜ 父 'father'. Chi. 父 *bjuX* < *[b](r)aʔ (01-67/0102a), Tib. ཕ *pha*, Bur. ဖ *pha* 'father' (cf. Ma & Dai 1982: 24, Zhengzhang 1993: 65).

41b. 菎 *gin > gin 子 'son'.[69]

41c. 菌 *gunʔ > guɨnᵇ 同 '(some, together =) altogether'. This word is also glossed 菌 *gunʔ > guɨnᵇ 人 'people, men' at 20b and 部 'tribe' at 24a. See discussion at 20b.

41d. 毗 *bi > bi 賜 'give'. See discussion at 7b.

42a. 懷 *grˤui > ɣuɛi 懷 'cherish'. In the transcriptional Chinese dialect -ui had already broken to -uəi (cf. note 21). A loan from Chinese.

42b. 稿 *kˤɑuʔ > kɑuᵇ 抱 'embrace'.

42c. 匹 *pʰit > pʰit 匹 'roll'. A loan from Chinese.

42d. 漏 *rˤoh > loᶜ 帛 'silk'.

43a. 傳 *dron > ḍyæn 傳 'transmit'. Also occurs at 33c.

43b. 室 *l̥it (*s.ti[t] acc. to Baxter *& Sagart 2014b) > śit 告 'tell'. Compare Japhug Rgy. *ti* (past *tɯt*), Tangut *tshjij¹* < *tshjeej (5612) 'speak'. The proposal of these cognates suggests that OChi. *s.t- had not yet changed to *sy-* (Baxter & Sagart 2014a: 135).

43c-d. 呼敕 *hˤɑ r̥ə, *hˤɑh r̥ə > hɑ ṭʰɨk, hɑᶜ ṭʰɨk 種人 'tribesmen'. On the development of OChi. *-ə- in the Chinese transcriptional dialect see discussion at 13a.

44a. 陵 *rəŋ > lɨŋ 長 'long'. See discussion at 13d.

44b. 陽 *lɑŋ > jɑŋ 願 'desire'. See discussion at 13a.

44c. 臣 *gin > dźin 臣 'subject'. A loan from Chinese.

44d. 僕 *bˤok > bok 僕 'servant'. A loan from Chinese.

3.2 End rhyme in the Bailang songs

Beckwith notes the implicit understanding of previous scholarship (cf. Dong 1937: 10, Coblin 1979: 169) that the Bailang songs are unrhymed, objecting that the "songs themselves do in fact rhyme, and they do so in extremely intricate, artistic ways. This is actually the most significant linguistic point about the texts" (2008: 89). Beckwith emphasizes the methodological inadequacies of traditional Chinese phonological

69 Zhengzhang (1993: 65) reads 苴 *tshɑ > tshiɑ (01-57/0046t), which allows him to propose the reasonable looking cognates Bur. သား *sāḥ*, Tib. ཚ *tsha* 'grandson', and Chi. 子 *tsiX* < *tsəʔ (04-47/0964a).

reconstruction and also stresses that the Bailang language would have had a phonological system distinct from Chinese and it is only with respect to Bailang phonology that one can judge whether the poems rhyme. Unfortunately, Beckwith says very little about his own methodology in reconstructing Bailang phonology; his finding are concomitantly difficult to confirm.

Here I present and discuss the Bailang rhyme words (i.e. the phonological material represented by the character standing at the end of each line of verse), marshaling those discoveries presented so far about the phonology of the Chinese transcriptional dialect, and to a lesser extent to Bailang phonology itself.

For chronological reasons one can assume that the pronunciation of the transcriptional dialect was closer to Han Chinese than to Old Chinese. Thus, I take Schuesser's Han Chinese as a starting point. In several respects the transcriptional dialect is more conservative than Han Chinese, in particular initial r- had not yet become l- (see discussion at 11a-b) and '-r- coloring' had not yet taken place (see p. 8). The ensuing discussion makes these changes to Schuessler's Han Chinese in the presentation of the Bailang rhyme words.

End rhyme is most clear in the second poem. The rhyme words in this poem are: 尼 nei^{c}[70] 悟 ŋɑ^{c} 旅 liɑ^{b} 雒 rɑk 諾 nɑk 洗 ser 藩 pɑr 螺 ruɑi 漓 riɑi 推 t^{h}uəi[71] 險 hrɨɑm/hɨɑm 柳 rui^{b} 德 tək 摸 mɑ. The apparent rhyme of 洗 ser with 尼 nei and 藩 pɑr with 螺 ruɑi and 漓 riɑi suggests that *-r changed to -i in the eastern dialect of the capital (Baxter & Sagart 2014a: 264-271).[72] If we accept the -r > -i hypothesis the rhyming pattern is A, B, B, C, C, A, D, D, D, E, X, E, X, B. It is tempting to suggest further improvements, e.g. suggesting that 德 tək rhymes with 雒 rɑk and 諾 nɑk, but this would be imprudent without further evidence.[73]

A look at the end rhymes in the first poem, now assuming *-r > -i, yields the

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70 The alternative reading ṇi makes for worse rhyming.

71 The alternative reading tś^{h}ui makes for worse rhyming.

72 The first Chinese poem also provides some evidence for the change *-r > -i (see note 21). These syllables may all have been pronounced -r in Bailang. If, as hypothesized here, *-r had changed to -i in the transcriptional dialect, it would have no means of differentiating Bailang -r and Bailang -i.

73 Beckwith reconstructs the end rhymes as: 尼 *ni, 悟 *ŋɑ, 旅 *rjɑ, 雒 *r/lɑʔ, 諾 *nrɑʔ, 洗 *sɑr, 藩 *pɑr, 螺 *r/lɑj, 漓 *r/lɑj, 推 *t^{h}wi, 險 kẽw, 柳 r/lew, 德 tɑʔ, 摸 mɑʔ, with the pattern ABBCCDDEEAFFCC (2008: 104). To me the rhyme of 險 hrɨɑm/hɨɑm with 柳 rui^{b} seems quite unlikely. The suggestion that 德 tək and 摸 mɑ rhyme is not quite so implausible, but I am uncomfortable saying that all -k were lost in the transcriptional dialect (or in Bailang); some cognates (in particular Bailang 莫 *mrˤɑk > mæk, *mˤɑk > mɑk, *mˤɑks > mɑ^{c} 子 'son' [14a] : Bur. မက် *mak* 'son-in-law', etc. and 諾 *nˤɑk > nɑk 深 'deep' (19d) : Bur. နက် *nak* 'deep', etc. suggest the maintenance of *-k.

following final words: 構 ko^{c}, 糟 tsou, 脾 bie, 留 riu, 旅 riɑ^{b}, 艾 ŋɑs/ŋiɑs, 補 pɑ^{b}, 遠 wɑi^{c}/^{b}, 便 briɑi(^{c}/^{b})[74], 離 riɑi(^{c}), 洞 doŋ^{c}, 由 jiəu, 鱗 riŋ (see comm. to 13a), 存 dzəi. These words yield a rhyme pattern: X, A, X, A, B, B, B, C, C, C, X, A, X, X. Again one could suggest further improvements, in particular that 存 dzəi rhymed with 遠 wɑi^{c}/^{b}, 便 briɑi(^{c}/^{b}), and 離 riɑi(^{c}), but it is not clear this would be prudent.[75]

The rhyme patterns of the third poem are less obvious. The rhyme words are: 儀 ŋɨɑi, 憐 ren, 犁 rei/ri, 沐 mok, 微 mui, 拒 gɨɑ^{b}/kyɑ^{b}, 仁 ńin, 龍 rioŋ/mroŋ, 幢 droŋ, 祿 rok, 淫 jəm (see comm. to 13b a) 雒 rɑk, 吡 bi, 漏 ro^{c}, 敕 ṭʰɨk, 僕 bok. Looking just at the codas we have: -ɑi, -en, -ei/-i, -ok, -ui, -ɑ, -in, -oŋ, -oŋ, -ok, -əm, -ɑk, -i, -o, -ɨk, -ok. In their Han Chinese garb they do little more than suggest that the poem might have been intended to rhyme. In some cases the Old Chinese readings would improve the rhyming. For example, the Old Chinese readings 憐 *rˤin and 仁 *nin rhyme, but their Han equivalents 憐 ren and 仁 ńin do not. I am able to offer no further insight on the rhyming patterns of the third poem.[76]

Beckwith appears to be correct that the Bailang poems rhyme. Nonetheless, much remains murky, and the temptation to alter our interpretation of Bailang phonology to improve rhyming further, although it would be defensible if there were a clearly structured rhyme pattern, is methodologically dangerous, and here avoided. More extensive research is required to improve our understanding of Bailang rhyming.

4 Conclusions about Chinese phonology

This study permits the conclusion that the transcriptional Chinese dialect had already undergone the following changes.

'final cluster simplification' (Baxter 1992: 568) (see comm. to 4b)

'rounding diphthongization' (Baxter 1992: 566-567) (see p. 7)

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74 Following the discussion at (8d) and (14d), I take 遠 *wɑns > wɑn^{c}, *wɑnʔ > wɑn^{b}, 便 *ben > biæn, and 存 *dzˤən > dzən, to have originally had final -r.

75 The A rhymes are somewhat more straightforward in Old Chinese (糟 *tsˤu, 留 *ru, 由 *ju) than in Han Chinese (糟 tsou, 留 riu, 由 jiəu) perhaps suggesting that the relevant changes had not yet occurred. Beckwith gives the end rhymes as 構 *kew, 糟 *tsew, 脾 *bi, 留 *r/lew, 旅 *r/lɑʔ, 艾 *ŋi, 補 *pɑ, 遠 *wɑr, 便 *bjar, 離 *r/li, 洞 *dẽw, 由 *l/jew, 鱗 *r/liɴ, 存 *dwiɴ (2008: 97) to yield a pattern AABACACDDBAAEE. The key hypotheses are that *u and *o had changed to *ew and that nasalization was (in some cases?) super-segmental.

76 Beckwith reconstructs the rhyme words of the third poem as: 儀 *ŋei, 憐 *riɴ, 犁 *r/lei, 沐 *moʔ, 微 *mui, 拒 *gjo, 仁 *njiɴ, 龍 *r/lẽw 幢 *drẽw, 祿 *r/loʔ, 淫 *jẽw, 雒 *rɑʔ, 吡 *bei, 漏 *r/lo, 敕 *r/lei 僕 *boʔ, which leads to a pattern ABAC ADBE ECEF ADAC (2008: 105).

*l- > j- in type B syllables (Baxter 1992: 197) (see comm. to 39d)

-r > -i (Baxter & Sagart 2014a: 264-271) (see p. 42)

The transcriptional dialect had not undergone these changes.

lˤ- > d- in type A syllables (Baxter 1992: 197) (see comm. to 39d)

r > l- in both type A and type B syllables (Baxter & Sagart 2014a: 110) (see comm. to 11a-b)

sə.l- > zy- (Baxter & Sagart 2014a: 191) (see comm. to 39d)

'r-color' (Baxter 1992: 573-574) (see p. 8)

Evidence of erstwhile *-r, whether from the rhyming of the Chinese poems, the Bailang poems, or the etymological connections of Bailang words, is available for readings of the following characters.

端 twan < *tˤor (25-24/0168d) (p. 13, n. 38)

洗 sejX/senX < *sˤərʔ (33-25/0478j) (p. 13, n. 38 and comm. to 20d)

藩 pjon < *par (24-54/0195s) (p. 13, n. 38)

飛 pjɨj < *Cə.pə[r] (27-09/0580a) (p. 13, n. 38)

便 bjienH < *[b]e[n]-s (23-25/0221a) (see comm. to 9d)

存 dzwon < *[dz]ˤə[n] (33-22/0432a) (see comm. to 14d)

遠 hjwonX < *C.ɢʷanʔ (25-15/0256f) (see p. 43, n. 74 and comm. to 8d)

Miscellaneous conclusions include that 大 'big' is perhaps better reconstructed in Old Chinese with initial *dˤ- than with initial *lˤ- (see comm. to 1a) and that the irregular phonetic development of 存 (i.e. *dzˤən > dzən and not dzen, see Baxter 1992: 431-432) took place in the history of the transcriptional dialect, and preceded the change of *-r > i (or -n in the dialect ancestral to MChi.); see comm. to 13a.

5 The sub-grouping of Bailang

As Coblin summarizes, there is a tradition of seeing Bailang as a member of Lolo-Burmese, or at least closely affiliated with the Loloish (or Naic) languages (1979: 197). Coblin appears to take this hypothesis for granted in his search for cognates rather than arguing for it explicitly.

Beckwith sees the Bailang word 理 *rəʔ > liə^{b} 百 'hundred' (40a) as particularly close to Lolo-Burmese (2008: 95, 107), but this is because he follows Matisoff in projecting the epenthetic -g- of the Tibetan form into the Trans-Himalayan proto-language. According to Li's law this -g- is an Tibetan innovation (Li 1959). The Bailang form just as close to Tib. བརྒྱ་ < *bryaḫ, Tan. [illegible] *.jir*^{2} < *r-ja (2798), or Japhug Rgy. *ɣurʐa* <*wə-rja as it is to OBur. ရျာ *ryā*. As noted above, potentially the Bailang word belongs to a wholly different

etymon, namely the etymon seen in Japhug Rgy. *-ri* 'hundred'. The Bailang first person pronoun 支 *ke > kie > tśe ɹ 'we, us' (4c) weighs against an affiliation with Lolo-Burmese, since velar (or uvular) initial first person pronouns are absent in this sub-branch, although they are widespread across the Trans-Himalayan family in general.

The word 'home' (Bailang 淫 /jəm/ [39d], Tib. ཁྱིམ་ *khyim* 'home', Bur. အိမ် *im,* Chi. □ *q(r)[ə]m-s 'subterranean room') offers better evidence for a close tie between Bailang and Lolo-Burmese. Sagart suggests that in such correspondences the Chinese uvular is original and that it develops a velar in Tibetan and is lost in Burmese (2006: 212). The loss of uvulars is thus a potential isogloss that unites Bailang and Burmese. However, taken alone this is not compelling evidence for subgrouping.

One might be tempted to look at those word in which Tibetan *-iṅ* corresponds to Burmese *-ac* < *-ik, such as 'heart' and 'wood', for a clue to which language Bailang appears closer to. However, such an investigation yields the curious result that in the word 'heart' (Bailang ▯ /nəŋ/ [28a]. Chi. ⎜ *nyin* < *niŋ (32-28/0388f) 'kindness', Tib. སྙིང་ *sñiṅ* 'heart', Bur. နှစ် *nhac* <*ˀnik 'kernel', Tan. ▯ *njiij* < *njeej < *njeeN 'coeur') Bailang patterns with Tibetan in having a velar nasal final rather than a velar stop final, but in the word ˊ *sək > sɨk O 'wood' (39a) the velar stop final of Bailang patterns with the Burmish languages (Bur. သစ် *sac* < *sik 'tree', Lashi *sə:kH*) against the velar nasal of other languages (Chi. ⎛ *si[ŋ] 'firewood', Tib. ཤིང་ *śiṅ* 'wood', Tan. ▯ sji¹ < *sje < *sjeN [4250] 'bois, arbre'). The conclusion appears inescapable that variation between *ik and *iŋ in these words, probably of a morphological nature, was present already in the proto-language.

Abbreviations

Bur. Burmese

Chi. Chinese

MChi. Middle Chinese

OBur. Old Burmese

OChi. Old Chinese

Rgy. Rgyalrong (apud Jacques 2014)

Tan. Tangut (apud Jacques 2014)

Th. Thangmi (apud Turin 2012)

Tib. Tibetan

WBur. Written Burmese

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Mdz. *Mdzaṅs blun źes bya baḥi mdo* (Derge Kanjur, vol. 74, pp. 29a-298a)

Mila *Mi la ras paḥi rnam thar* (de Jong 1959)

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